GCTCAGGTTAGCCCGAAAGATGTTCAGTATAGATTAGGCCACTCTAATTTAATGATCACTGAAAATACTTACTGGCATACTAA
CCAAGAGAATGCAAAAAAAGCCGTCTCAAATTATGAAACAGCTATCAACAATTTATAA

(SEQ. ID. NO. 195)
MEGLVRVHLLPVFGDYKLSKLTTPILQQQVNKWADKANKGEKGAFANYSLLHNMNKRILKYGVAIQVIQYNPANDVIVPRKQQ
KEKAAVKYLDNKELKQFLDYLDALDQSNYENLFDVVLYKTLLATGCRISEALALEWSDIDLESGVISINKTLNRYQEINSPKS
SAGYRDIPIDKATLLLLKQYKNRQQIQSWKLGRSETVVFSVFTEKYAYACNLRKRLNKHFDAAGVTNVSFHGFRHTHTTMMLY
AQVSPKDVQYRLGHSNLMITENTYWHTNQENAKKAVSNYETAINNLZ--

Please delete the first paragraph located on page 101, line 1, and replace therewith the following replacement paragraph. A marked-up version showing changes made to the replacement paragraphs is contained herewith as Appendix B.

--*What is claimed is*:--

REMARKS

Claims 1-20 are currently pending in this application. Upon entry of the amendments contained herein, claims 1-22 will be pending. No new matter is introduced into the specification by way of these amendments. The Specification amendments are introduced to conform the application to the requirements of 37 C.F.R. § § 1.77 and 1.821-1.825. Support for the claim amendments can be found, inter alia, throughout the application as originally filed, for example, in the originally filed claims; on page 9, last two full paragraphs; and in Table 3. Support for new claim 21 can be found, inter alia, throughout the specification, for example, on page 9, last two full paragraphs. Support for new claim 22 can be found, inter alia, throughout the Specification, for example, on page 9, last two full paragraphs and on page 13, third full paragraph.

Priority

The Examiner has made acknowledgement of Applicant's claim of foreign priority based on "German" foreign application number 9816337.1. Applicants respectfully state that the claim to foreign priority is in fact based upon Great Britain priority application number 9816337.1. Applicants respectfully direct the Examiner's attention to the executed declaration, claiming the benefit of GB 9816337.1, as well as the cover sheet of International Publication Number WO 00/06738 (reciting the priority application GB 9816337.1, and of which the instant application claims benefit), attached herewith as Appendix C. Applicants will provide the Examiner with a certified copy of Great Britain priority application GB 9816337.1 within a reasonable time of receipt of the document.

Restriction Requirement

In the Office Action dated September 22, 2002, the Examiner required restriction of the pending claims under 35 U.S.C. § 121 between one of the following inventions:

"**1.)** Claims 7-8 and 13 drawn to DNA, host cell and a vaccine composition, classified in class 536, subclass 23.7. Further election of invention required.

2.) Claims 1-6 and 10-12 drawn to polypeptide, classified in class 424, subclass 190.1. Further election of invention required.

3.) Claims 15-16 drawn to an antibody classified in class 530, subclass 388.6. Further election of invention required.

4.) Claim 9 drawn to a method for inducing immune response using polypeptide classified in class 424, subclass 165.1. Further election of invention required.

5.) Claim 20 drawn to a method of use for the treatment or prophylaxis of S. pneumoniae infection using protein or polypeptide classified in class 424, subclass 184.1. Further election of invention required.

6.) Claim 19 drawn to a method of determining whether a protein is anti-microbial target in vivo or in vitro classified in class 424, subclass 93.1. Further election of invention required.

7.) Claim 18 drawn to a method of detecting S. pneumoniae infection using nucleic acid, SEQ ID NO:1 classified in class 435, subclass 6. Further election of invention required.

8.) Claim 14 drawn to a method of detecting S. pneumoniae infection using protein antigen, SEQ ID NO:2, classified in class 435, subclass 7.22. Further election of invention required.

9.) Claim 17 drawn to a method of detecting S. pneumoniae infection using antibody classified in class 435, subclass 7.22. Further election of invention required."

See Paper No. 11, page 2. The Examiner further required election of one sequence falling within one of the above-identified inventions.

Applicants were contacted by the Examiner and invited to make an election to a restriction requirement by telephone. The Examiner originally designated (by telephone) as separate inventions the following 5 groups: (I) *S. pneumoniae* nucleic acid sequences (claims 7-8 and 18); (II) *S. pneumoniae* peptide sequences (claims 1-6 and 9-14); (III) antibodies to *S. pneumoniae* antigens (claims 15-17); (IV) methods of assay design (claim 19); and therapeutic methods (claim 20). Based upon this grouping of claims, Applicants provisionally elected by telephone on July 09, 2002, without traverse, the invention of Group V, claim 20, *drawn to therapeutic methods*. To the extent that the restriction requirement in the Office Action dated September 20, 2002, differs from that described in the telephone restriction to which Applicants responded on July 9, 2002, the restriction is traversed. In particular, Applicants submit that there is substantial overlap in scope between Group 4 and Group 5 or Group 6. Dependent claims to particular embodiments may properly fall within the scope of both generic claim 9 and generic claim 20. Likewise, dependent claims to other

embodiments may properly fall within the scope of both generic claim 9 and generic claim 19. Applicants respectfully request that the restriction requirement be recast.

Applicants also submit that the requirement for election of a single nucleotide (polypeptide) sequence is properly characterized as an election of species. Applicants provisionally elect the invention of claim 20, now classified in Group 5.

Consistent with the requirement of election of species, Applicants hereby further elect the protein sequence as set forth in SEQ ID NO:162.

Rejections

35 U.S.C. § 101

The Examiner rejected claim 20 under 35 U.S.C. § 101, as allegedly improperly defining a process. Applicants have amended claim 20 to conform with U.S. Rules of Practice, thereby rendering the Examiner's rejection moot. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 20 under 35 U.S.C. § 101.

35 U.S.C. § 112, 2nd Paragraph

The Examiner rejected claim 20 under 35 U.S.C. § 112, 2nd Paragraph as allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. More specifically, the Examiner stated that "the claim does not set forth any steps involved in the method/process, [and therefore] it is unclear what method/process applicant is intending to encompass." *See* Paper No. 11, Page 7, lines 4-6. Similarly, the Examiner stated that the claim is further indefinite because "the claims do not recite positive active steps so that the claims will set out and circumscribe particular area with reasonable degree of precision and particularly [sic] and make clear what subject matter the claims encompass, as well as make clear the subject matter from which others would be precluded." *See* Paper No. 11, Page 7, lines 9-13.

The Examiner further determined that "additional structural parameters, such as amino acid sequence of the polypeptide (for example; SEQ.ID.NO), would enable more definitive identification of the claimed polypeptide without ambiguity." *See* Paper No. 11, Page 7, lines 17-19.

The Examiner also rejected claim 20 as allegedly vague for the recitation of "capable of" within the claim, as this recitation allegedly makes it difficult to determine the metes and bounds of the claim.

Applicants have amended claim 20 to confirm to U.S. practice. As a result of the claim amendment, the Examiner's rejection of claim 20 has been rendered moot. Applicants respectfully request withdrawal of the rejection of claim 20 under 35 U.S.C. § 112, 2nd Paragraph, and reconsideration of the application in view of the amendments.

Conclusion

Applicants believe that amendment of the subject application has placed this application in a condition for allowance. Early notification of a favorable consideration is respectfully requested.

Respectfully submitted,

Dated: March 20, 2003

By: _____

Laurence H. Posorske
Registration No. 34,698
Robert C. Lampe III
Registration No. 51,914

HUNTON & WILLIAMS
1900 K Street, N.W.
Suite 1200
Washington, D.C. 20006-1109
Telephone: (202) 955-1500
Facsimile: (202) 778-2201

Hand Delivered March 20, 2003

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of :	)	
	)	
GILBERT, C.F.G., *et al.*	)	Examiner: Baskar, P.
	)	
Serial No.: 09/769,787	)	Group Art Unit: 1645
	)	
Filed: January 26, 2001	)	

For: NUCLEIC ACIDS AND PROTEINS FROM STREPTOCOCCUS PNEUMONIAE

Under Secretary of Commerce for Intellectual Property and
Director of the United States Patent and Trademark Office

Washington, D.C. 20231

Appendix A - Version with Markings to show changes made to the Claims

In claim 20:

--20. (Amended) A method for treatment or prophylaxis of *S. pneumoniae* infection comprising administering to a patient in need thereof ~~The use of~~ an agent capable of antagonizing, inhibiting or otherwise interfering with the function or expression of a protein or polypeptide as defined in Tables 2-4 ~~in the manufacture of a medicament for use in the treatment or prophylaxis of *S. pneumoniae* infection~~, wherein said agent induces an immune response in said patient to a polypeptide having a sequence comprising SEQ. ID NO:162.--

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of :	)	
	)	
GILBERT, C.F.G., *et al.*	)	Examiner: Baskar, P.
	)	
Serial No.: 09/769,787	)	Group Art Unit: 1645
	)	
Filed: January 26, 2001	)	

For: NUCLEIC ACIDS AND PROTEINS FROM STREPTOCOCCUS PNEUMONIAE

Under Secretary of Commerce for Intellectual Property and
Director of the United States Patent and Trademark Office

Washington, D.C. 20231

Appendix B - Version with Markings to show changes made

In the paragraphs starting at page 29, 1st full paragraph (immediately below the heading "Table 1") and extending to and including the last full paragraph located on page 100:

4101.1 (SEQ. ID. NO. 208)
ATGGAAGAGTTAGTGACCTTAGATTGTTTGTTTATTGACAGAACTAAGATTGAAGCCAATGCCAACAAGTATAGTTTTGTGTG
GAAGAAAACGACAGAGAAATTCTCCGCCAAACTTCAAGAACAGATACAGGTCTATTTTCAAGAAGAAATCACTCCCCTTCTG
ATTAAATATGCCATGTTTGATAAGAAACAAAAGAGAGGGTATAAAGAGTCAGCTAAAAACTTAGCGAATTGGCACTATAAT
GACAAGGAGGATAGCTACACACATCCTGATGGCTGGTATTATCGTTTTCACCATACCAAATATCAGAAAACACAGACAGACT
TTCAACAAGAAATCAAGGTTTACTACGCCGACGAACCTGAATCAGCCCCTCAAAAGGGACTGTATATGAACGAACGCTATCA
AAACTTGAAAGCTAAAGAATGTCAGGCGCTTTTATCTCCCCAAGGTAGACAGATTTTCGCTCAACGCAAGATTGATGTGGAA
CCTGTCTTTGGGCAGATAAAGGCTTCTTTGGGTTACAAGAGATGTAATCTGAGAGGGAAGCGTCAAGTGAGAATTGACATGG
GATTGGTACTTATGGCCAATAACCTCCTAAAATATAGTAAAATGAAATAA

4101.3 (SEQ. ID. NO. 209)
ATGGGGAAAGGCCATTGGAATCGGAAAAGAGTTTATAGCATTCGTAAGTTTGCTGTGGGAGCTTGCTCAGTAATGATTGGGA
CTTGTGCAGTTTTATTAGGAGGAAATATAGCTGGAGAATCTGTAGTTTATGCGGATGAAACACTTATTACTCATACTGCTGAG
AAACCTAAAGAGGAAAAAATGATAGTAGAAGAAAAGGCTGATAAAGCTTTGGAAACTAAAAATATAGTTGAAAGGACAGA
ACAAAGTGAACCTAGTTCAACTGAGGCTATTGCATCTGAGAAGAAAGAAGATGAAGCCGTAACTCCAAAAGAGGAAAAAGT
GTCTGCTAAACCGGAAGAAAAAGCTCCAAGGATAGAATCACAAGCTTCAAATCAAGAAAAACCGCTCAAGGAAGATGCTAA
AGCTGTAACAAATGAAGAAGTGAATCAAATGATTGAAGACAGGAAAGTGGATTTTAATCAAAATTGGTACTTTAAACTCAAT
GCAAATTCTAAGGAAGCCATTAAACCTGATGCAGACGTATCTACGTGGAAAAAATTAGATTTACCGTATGACTGGAGTATCT
TTAACGATTTCGATCATGAATCTCCTGCACAAAATGAAGGTGGACAGCTCAACGGTGGGGAAGCTTGGTATCGCAAGACTTT
CAAACTAGATGAAAAAGACCTCAAGAAAAATGTTCGCCTTACTTTTGATGGCGTCTACATGGATTCTCAAGTTTATGTCAATG
GTCAGTTAGTGGGGCATTATCCAAATGGTTATAACCAGTTCTCATATGATATCACCAAATACCTTCAAAAAGATGGTCGTGA
GAATGTGATTGCTGTCCATGCAGTCAACAAACAGCCAAGTAGCCGTTGGTATTCAGGAAGTGGTATCTATCGTGATGTGACT
TTACAAGTGACAGATAAGGTGCATGTTGAGAAAAATGGGACAACTATTTTAACACCAAAACTTGAAGAACAACAACATGGC
AAGGTTGAAACTCATGTGACCAGCAAAATCGTCAATACGGACGACAAAGACCATGAACTTGTAGCCGAATATCAAATCGTTG
AACGAGGTGGTCATGCTGTAACAGGCTTAGTTCGTACAGCGAGTCGTACCTTAAAAGCACATGAATCAACAAGCCTAGATGC
GATTTTAGAAGTTGAAAGACCAAAACTCTGGACTGTTTTAAATGACAAACCTGCCTTGTACGAATTGATTACGCGTGTTTACC
GTGACGGTCAATTGGTTGATGCTAAGAAGGATTTGTTTGGTTACCGTTACTATCACTGGACTCCAAATGAAGGTTTCTCTTTG
AATGGTGAACGTATTAAATTCCATGGAGTATCCTTGCACCACGACCATGGGGCGCTTGGAGCAGAAGAAAACTATAAAGCA
GAATATCGCCGTCTCAAACAAATGAAGGAGATGGGAGTTAACTCCATCCGTACAACCCACAACCCTGCTAGTGAGCAAACCT
TGCAAATCGCAGCAGAACTAGGTTTACTCGTTCAGGAAGAGGCCTTTGATACGTGGTATGGTGGCAAGAAACCTTATGACTA
TGGACGTTTCTTTGAAAAAGATGCCACTCACCCAGAAGCTCGAAAAGGTGAAAAATGGTCTGATTTTGACCTACGTACCATG

GTCGAAAGAGGCAAAAACAACCCTGCTATCTTCATGTGGTCAATTGGTAATGAAATAGGTGAAGCTAATGGTGATGCCCACT
CTTTAGCAACTGTTAAACGTTTGGTTAAGGTTATCAAGGATGTTGATAAGACTCGCTATGTTACCATGGGAGCAGATAAATTC
CGTTTCGGTAATGGTAGCGGAGGGCATGAGAAAATTGCTGATGAACTCGATGCTGTTGGATTTAACTATTCTGAAGATAATT
ACAAAGCCCTTAGAGCTAAGCATCCAAAATGGTTGATTTATGGATCAGAAACATCTTCAGCTACCCGTACACGTGGAAGTTA
CTATCGCCCTGAACGTGAATTGAAACATAGCAATGGACCTGAGCGTAATTATGAACAGTCAGATTATGGAAATGATCGTGTG
GGTTGGGGGAAAACAGCAACCGCTTCATGGACTTTTGACCGTGACAACGCTGGCTATGCTGGACAGTTTATCTGGACAGGTA
CGGACTATATTGGTGAACCTACACCATGGCACAACCAAAATCAAACTCCTGTTAAGAGCTCTTACTTTGGTATCGTAGATACA
GCCGGCATTCCAAAACATGACTTCTATCTCTACCAAAGCCAATGGGTTTCTGTTAAGAAGAAACCGATGGTACACCTTCTTCC
TCACTGGAACTGGGAAAACAAAGAATTAGCATCCAAAGTAGCTGACTCAGAAGGTAAGATTCCAGTTCGTGCTTATTCGAAT
GCTTCTAGTGTAGAATTGTTCTTGAATGGAAAATCTCTTGGTCTTAAGACTTTCAATAAAAAACAAACCAGCGATGGGCGGA
CTTACCAAGAAGGTGCAAATGCTAATGAACTTTATCTTGAATGGAAAGTTGCCTATCAACCAGGTACCTTGGAAGCAATTGC
TCGTGATGAATCTGGCAAGGAAATTGCTCGAGATAAGATTACGACTGCTGGTAAGCCAGCGGCAGTTCGTCTTATTAAGGAA
GACCATGCGATTGCAGCAGATGGAAAAGACTTGACTTACATCTACTATGAAATTGTTGACAGCCAGGGGAATGTGGTTCCAA
CTGCTAATAATCTGGTTCGCTTCCAATTGCATGGCCAAGGTCAACTGGTCGGTGTAGATAACGGAGAACAAGCCAGCCGTGA
ACGCTATAAGGCGCAAGCAGATGGTTCTTGGATTCGTAAAGCATTTAATGGTAAAGGTGTTGCCATTGTCAAATCAACTGAA
CAAGCAGGGAAATTCACCCTGACTGCCCACTCTGATCTCTTGAAATCGAACCAAGTCACTGTCTTTACTGGTAAGAAAGAAG
GACAAGAGAAGACTGTTTTGGGGACAGAAGTGCCAAAAGTAAGACCAATTATTGGAGAGGCACCTGAAATGCCTACCACTG
TTCCGTTTGTATACAGTGATGGTAGCCGTGCAGAACGTCCTGTAACCTGGTCTTCAGTAGATGTGAGCAAGCCTGGTATTGTA
ACGGTGAAAGGTATGGCTGACGGACGAGAAGTAGAAGCTCGTGTAGAAGTGATTGCTCTTAAATCAGAGCTACCAGTTGTG
AAACGTATTGCTCCAAATACTGACTTGAATTCTGTAGACAAATCTGTTTCCTATGTTTTGATTGATGGAAGTGTTGAAGAGTA
TGAAGTGGACAAGTGGGAGATTGCCGAAGAAGATAAAGCTAAGTTAGCAATTCCAGGTTCTCGTATTCAAGCGACCGGTTAT
TTAGAAGGTCAACCAATTCATGCAACCCTTGTGGTAGAAGAAGGCAATCCTGCGGCACCTGCAGTACCAACTGTAACGGTTG
GTGGTGAGGCAGTAACAGGTCTTACTAGTCAAAAACCAATGCAATACCGCACTCTTGCTTATGGAGCTAAGTTGCCAGAAGT
CACAGCAAGTGCTAAAAATGCAGCTGTTACAGTTCTTCAAGCAAGCGCAGCAAACGGCATGCGTGCGAGCATCTTTATTCAG
CCTAAAGATGGTGGCCCTCTTCAAACCTATGCAATTCAATTCCTTGAAGAAGCGCCAAAAATTGCTCACTTGAGCTTGCAAGT
GGAAAAAGCTGACAGTCTCAAAGAAGACCAAACTGTCAAATTGTCGGTTCGAGCTCACTATCAAGATGGAACGCAAGCTGT
ATTACCAGCTGATAAAGTAACCTTCTCTACAAGTGGTGAAGGGGAAGTCGCAATTCGTAAAGGAATGCTTGAGTTGCATAAG
CCAGGAGCAGTCACTCTGAACGCTGAATATGAGGGAGCTAAAGACCAAGTTGAACTCACTATCCAAGCCAATACTGAGAAG
AAGATTGCGCAATCCATCCGTCCTGTAAATGTAGTGACAGATTTGCATCAGGAACCAAGTCTTCCAGCAACAGTAACAGTTG
AGTATGACAAAGGTTTCCCTAAAACTCATAAAGTCACTTGGCAAGCTATTCCGAAAGAAAAACTAGACTCCTATCAAACATT
TGAAGTACTAGGTAAAGTTGAAGGAATTGACCTTGAAGCGCGTGCAAAAGTCTCTGTAGAAGGTATCGTTTCAGTTGAAGAA
GTCAGTGTGACAACTCCAATCGCAGAAGCACCACAATTACCAGAAAGTGTTCGGACATATGATTCAAATGGTCACGTTTCAT
CAGCTAAGGTTGCATGGGATGCGATTCGTCCAGAGCAATACGCTAAGGAAGGTGTCTTTACAGTTAATGGTCGCTTAGAAGG
TACGCAATTAACAACTAAACTTCATGTTCGCGTATCTGCTCAAACTGAGCAAGGTGCAAACATTTCTGACCAATGGACCGGTT
CAGAATTGCCACTTGCCTTTGCTTCAGACTCAAATCCAAGCGACCCAGTTTCAAATGTTAATGACAAGCTCATTTCCTACAAT
AACCAACCAGCCAATCGTTGGACAAACTGGAATCGTACTAATCCAGAAGCTTCAGTCGGTGTTCTGTTTGGAGATTCAGGTA
TCTTGAGCAAACGCTCCGTTGATAATCTAAGTGTCGGATTCCATGAAGACCATGGAGTTGGTGTACCGAAGTCTTATGTGATT
GAGTATTATGTTGGTAAGACTGTCCCAACAGCTCCTAAAAACCCTAGTTTTGTTGGTAATGAGGACCATGTCTTTAATGATTC
TGCCAACTGGAAACCAGTTACTAATCTAAAAGCCCCTGCTCAACTCAAGGCTGGAGAAATGAACCACTTTAGCTTTGATAAA
GTTGAAACCTATGCTGTTCGTATTCGCATGGTTAAAGCAGATAACAAGCGTGGAACGTCTATCACAGAGGTACAAATCTTTG
CGAAACAAGTTGCGGCAGCCAAGCAAGGACAAACAAGAATCCAAGTTGACGGCAAAGACTTAGCAAACTTCAACCCTGATT
TGACAGACTACTACCTTGAGTCTGTAGATGGAAAAGTTCCGGCAGTCACAGCAAGTGTTAGCAACAATGGTCTCGCTACCGT
CGTTCCAAGCGTTCGTGAAGGTGAGCCAGTTCGTGTCATCGCGAAAGCTGAAAATGGCGACATCTTAGGAGAATACCGTCTG
CACTTCACTAAGGATAAGAGCTTACTTTCTCATAAACCAGTTGCTGCGGTTAAACAAGCTCGCTTGCTACAAGTAGGTCAAGC
ACTTGAATTGCCGACTAAGGTTCCAGTTTACTTCACAGGTAAAGACGGCTACGAAACAAAAGACCTGACAGTTGAATGGGAA
GAAGTTCCAGCGGAAAATCTGACAAAAGCAGGTCAATTTACTGTTCGAGGCCGTGTCCTTGGTAGTAACCTTGTTGCTGAGA
TCACTGTACGAGTGACAGACAAACTTGGTGAGACTCTTTCAGATAACCCTAACTATGATGAAAACAGTAACCAGGCCTTTGC
TTCAGCAACCAATGATATTGACAAAAACTCTCATGACCGCGTTGACTATCTCAATGACGGAGATCATTCAGAAAATCGTCGT
TGGACAAACTGGTCACCAACACCATCTTCTAATCCAGAAGTATCAGCGGGTGTGATTTTCCGTGAAAATGGTAAGATTGTAG
AACGGACTGTTACACAAGGAAAAGTTCAGTTCTTTGCAGATAGTGGTACGGATGCACCATCTAAACTCGTTTTAGAACGCTA
TGTCGGTCCAGAGTTTGAAGTGCCAACCTACTATTCAAACTACCAAGCCTACGACGCAGACCATCCATTCAACAATCCAGAA
AATTGGGAAGCTGTTCCTTATCGTGCGGATAAAGACATTGCAGCTGGTGATGAAATCAACGTAACATTTAAAGCTATCAAAG
CCAAAGCTATGAGATGGCGTATGGAGCGTAAAGCAGATAAGAGCGGTGTTGCGATGATTGAGATGACCTTCCTTGCACCAAG
TGAATTGCCTCAAGAAAGCACTCAATCAAAGATTCTTGTAGATGGAAAAGAACTTGCTGATTTCGCTGAAAATCGTCAAGAC
TATCAAATTACCTATAAAGGTCAACGGCCAAAAGTCTCAGTTGAAGAAAACAATCAAGTAGCTTCAACTGTGGTAGATAGTG
GAGAAGATAGCTTTCCAGTACTTGTTCGCCTCGTTTCAGAAAGTGGAAAACAAGTCAAGGAATACCGTATCCACTTGACTAA
GGAA
AAACCAGTTTCTGAGAAGACAGTTGCTGCTGTACAAGAAGATCTTCCAAAAATCGAATTTGTTGAAAAAGATTTGGCATACA
AGACAGTTGAGAAAAAAGATTCAACACTGTATCTAGGTGAAACTCGTGTAGAACAAGAAGGAAAAGTTGGAAAAGAACGTA
TCTTTACAGCGATTAATCCTGATGGAAGTAAGGAAGAAAAACTCCGTGAAGTGGTAGAAGTTCCGACAGACCGCATCGTCTT
GGTTGGAACCAAACCAGTAGCTCAAGAAGCTAAAAAACCACAAGTGTCAGAAAAAGCAGATACAAAACCAATTGATTCAAG
TGAAGCTAGTCAAACTAATAAAGCCCAGTTACCAAGTACAGGTAGTGCGGCAAGCCAAGCAGCAGTAGCAGCAGGTTTAAC
TCTTCTAGGTTTGAGTGCAGGATTAGTAGTTACTAAAGGTAAAAAAGAAGACTAG

4101.5 (SEQ. ID. NO. 210)

ATGGATGCAATCTTTGACCTAATCGGAAAGGTTTTCAATCCCATCTTAGAAATGGGTGGACCTGTCATCATGTTAATCATTTT
GACAGTATTGGCTTTACTTTTTGGAGTGAAATTCTCCAAAGCGCTTGAAGGTGGTATCAAACTTGCCATCGCTCTTACAGGTA
TCGGTGCTATCATCGGTATGCTAAACACTGCTTTCTCAGCATCACTAGCAAAATTCGTTGAAAACACTGGTATCCAATTGAGT
ATTACCGACGTTGGTTGGGCACCACTTGCTACAATCACTTGGGGTTCTGCTTGGACACTATACTTCTTGCTCATCATGTTGATT
GTCAACATAGTGATGCTAGCTATGAAGAAAACAGATACACTTGATGTCGATATCTTTGATATCTGGCACTTGTCTATCACAGG
TCTCTTGATTAAATGGTATGCTGATAACAATGGTGTGAGTCAAGGGGTTTCACTCTTTATTGCTACAGCAGCTATCGTCCTTGT
CGGTGTGTTGAAAATTATCAACTCTGACTTGATGAAACCTACATTTGATGACCTTCTTAACGCCCCAAGTTCATCACCAATGA
CATCAACTCACATGAACTACATGATGAACCCAGTTATCATGGTTTTGGATAAGATTTTTGAAAAATTCTTCCCAGGCCTTGAT
AAATATGACTTTGATGCTGCTAAATTGAACAAGAAAATCGGTTTCTGGGGATCTAAATTCTTCATCGGTTTCATCCTTGGTAT

CGTTATCGGTATTATGGGAACTCCACATCCAATTGCAGGTGTTGCAGATGCAGATAAATGGCGTCTTGTTATCAAAGGATGGT
TGTCTCTTGGTTTGACTGCCGGTGTATCTTTGGAACTCTTCTCACTTATCGGTTCATGGTTCATCGCAGCCGTAGAACCACTAT
CACAAGGTATTACAAACGTTGCTACTAAACGTCTTCAAGGACGTAAATTCAATATCGGTCTTGACTGGCCATTCATCGCTGGT
CGTGCTGAAATCTGGGCTTGTGCCAACGTACTTGCACCAATCATGTTGATTGAAGCAGTGCTTCTTTCAAAAGTTGGAAATGG
TATCTTGCCACTTGCAGGTATCATCGCTATGGGTGTTACTCCAGCTCTCTTGGTTGTAACTCGTGGTAAATTGCTCCGTATGAT
TATCTTCGGAACACTCTTGTTGCCACTCTTCCTTCTTTCAGGTACACTTATTGCACCATTTGCAACAGAACTTGCTAAAGGTGT
AGGTGCCTTCCCAGAAGGTGTGAGCCAAACTCAATTGATTACTCACTCTACTCTTGAAGGACCAATCGAAAAACTTCTTGGTT
GGACAATTGGTAACACTACAACTGGTGATATCAAAGCAATCCTTGGTGCAGTAGTCTTCCTTGTATTCTATATCGGTATCTTT
GCTTGGTACAGAAAACAAATGATCAAACGTAACGAAGAGTACGCAGCAAAAGCAAAATAA

4102.1 (SEQ. ID. NO. 211)
ATGAAGATTATGAAAAAAAAATATTGGACTTTAGCGATATTATTCTTTTGTTTGTTCAATAATTCTGTTACTGCTCAAGAAAT
ACCTAAAAATCTTGATGGCAATATAACTCACACTCAGACTAGCGAAAGTTTTTCTGAATCTGATGAAAAACAGGTTGACTAT
TCTAATAAAAATCAAGAAGAAGTAGACCAAAATAAATTTCGTATTCAAATCGATAAGACAGAATTATTTGTAACAACAGATA
AACATTTAGAAAAAAACTGTTGTAAATTGGAACTTGAACCACAAATAAATAACGATATTGTTAACTCTGAAAGTAATAATTT
ACTAGGCGAAGATAATTTAGATAATAAAATTAAGGAAAATGTTTCTCATCTAGATAATAGAGGAGGAAATATAGAGCATGA
CAAAGATAACTTAGAATCGTCGATTGTAAGAAAATATGAATGGGATATAGATAAAGTTACTGGTGGAGGCGAAAGTTATAA
ATTATATTCTAAAAGTAATTCTAAAGTTTCAATTGCTATTTTAGATTCAGGAGTCGATTTACAAAATACTGGATTACTGAAAA
ATCTTTCAAATCACTCAAAAAACTATGTCCCCAATAAAGGATATTTAGGAAAAGAGGAGGGAGAGGAAGGAATAATATCAG
ATATTCAAGATAGATTAGGTCATGGTACGGCTGTTGTAGCTCAAATTGTAGGGGATGACAATATTAATGGAGTAAATCCTCA
CGTTAATATTAACGTCTATAGAATATTTGGTAAGTCGTCAGCTAGTCCAGATTGGATTGTAAAAGCAATTTTTGATGCTGTAG
ATGATGGCAATGATATTATCAATCTTAGTACTGGACAATATTTAATGATTGATGGAGAATATGAGGACGGAACAAATGATTT
TGAAACATTTTTGAAGTATAAAAAGGCTATTGATTACGCGAATCAAAAAGGAGTAATTATAGTAGCTGCATTAGGGAATGAC
TCCCTAAATGTATCAAATCAGTCAGATTTATTGAAACTTATTAGTTCACGCAAAAAAGTAAGAAAACCAGGATTAGTAGTTG
ATGTTCCAAGTTATTTCTCATCTACAATTTCGGTCGGAGGCATAGATCGCTTAG
GTAATTTATCAGATTTTAGCAATAAAGGGGATTCTGATGCAATATATGCGCCTGCAGGCTCAACATTATCTCTTTCAGAATTA
GGACTTAATAACTTTATTAATGCAGAAAAATATAAAGAAGATTGGATTTTTTCGGCAACACTAGGAGGATATACGTATCTTT
ATGGAAACTCATTTGCTGCTCCTAAAGTTTCTGGTGCGATTGCAATGATTATTGATAAATACAAATTAAAAGATCAGCCCTAT
AATTATATGTTTGTAAAAAAATTCTGGAAGAAACATTACCAGTAA

4106.1 (SEQ. ID. NO. 212)
ATGAAGAAAACATGGAAAGTGTTTTTAACGCTTGTAACAGCTCTTGTAGCTGTTGTGCTTGTGGCCTGTGGTCAAGGAACTGC
TTCTAAAGACAACAAAGAGGCAGAACTTAAGAAGGTTGACTTTATCCTAGACTGGACACCAAATACCAACCACACAGGGCTT
TATGTTGCCAAGGAAAAAGGTTATTTCAAAGAAGCTGGAGTGGATGTTGATTTGAAATTGCCACCAGAAGAAAGTTCTTCTG
ACTTGGTTATCAACGGAAAGGCACCATTTGCAGTGTATTTCCAAGACTACATGGCTAAGAAATTGGAAAAAGGAGCAGGAAT
CACTGCCGTTGCAGCTATTGTTGAACACAATACATCAGGAATCATCTCTCGTAAATCTGATAATGTAAGCAGTCCAAAAGAC
TTGGTTGGTAAGAAATATGGGACATGGAATGACCCAACTGAACTTGCTATGTTGAAAACCTTGGTAGAATCTCAAGGTGGAG
ACTTTGAGAAGGTTGAAAAAGTACCAAATAACGACTCAAACTCAATCACACCGATTGCCAATGGCGTCTTTGATACTGCTTG
GATTTACTACGGTTGGGATGGTATCCTTGCTAAATCTCAAGGTGTAGATGCTAACTTCATGTACTTGAAAGACTATGTCAAGG
AGTTTGACTACTATTCACCAGTTATCATCGCAAACAACGACTATCTGAAAGATAACAAAGAAGAAGCTCGCAAAGTCATCCA
AGCCATCAAAAAAGGCTACCAATATGCCATGGAACATCCAGAAGAAGCTGCAGATATTCTCATCAAGAATGCACCTGAACTC
AAGGAAAAACGTGACTTTGTCATCGAATCTCAAAAATACTTGTCAAAAGAATACGCAAGCGACAAGGAAAAATGGGGTCAA
TTTGACGCAGCTCGCTGGAATGCTTTCTACAAATGGGATAAAGAAAATGGTATCCTTAAAGAAGACTTGACAGACAAAGGCT
TCACCAACGAATTTGTGAAATAA

4106.4 (SEQ. ID. NO. 213)
ATGATAAAAAATCCTAAATTATTAACCAAGTCTTTTTTAAGAAGTTTTGCAATTCTAGGTGGTGTTGGTCTAGTCATTCATAT
AGCTATTTATTTGACCTTTCCTTTTTATTATATTCAACTGGAGGGGGAAAAGTTTAATGAGAGCGCAAGAGTGTTTACGGAGT
ATTTAAAGACTAAGACATCTGATGAAATTCCAAGCTTACTCCAGTCTTATTCAAAGTCCTTGACCATATCTGCTCACCTTAAA
AGAGATATTGTAGATAAGCGGCTCCCTCTTGTGCATGACTTGGATATTAAAGATGGAAAGCTATCAAATTATATCGTGATGTT
AGATATGTCTGTTAGTACAGCAGATGGTAAACAGGTAACCGTGCAATTTGTTCACGGGGTGGATGTCTACAAAGAAGCAAAG
AATATTTTGCTTTTGTATCTCCCATATACATTTTTGGTTACAATTGCTTTTTCCTTTGTTTTTTCTTATTTTTATACTAAACGCTT
GCTCAATCCTCTTTTTTACATTTCAGAAGTGACTAGTAAAATGCAAGATTTGGATGACAATATTCGTTTTGATGAAAGTAGGA
AAGATGAAGTTGGTGAAGTTGGAAAACAGATTAATGGTATGTATGAGCACTTGTTGAAGGTTATTTATGAGTTGGAAAGTCG
TAATGAGCAAATTGTAAAATTGCAAAATCAAAAGGTTTCCTTTGTCCGCGGAGCATCACATGAGTTGAAAACCCCTTTAGCC
AGTCTTAGAATTATCCTAGAGAATATGCAGCATAATATTGGAGATTACAAAGATCATCCAAAATATATTGCAAAGAGTATAA
ATAAGATTGACCAGATGAGCCACTTATTAGAAGAAGTACTGGAGTCTTCTAAATTCCAAGAGTGGACAGAGTGTCGTGAGAC
CTTGACTGTTAAGCCAGTTTTAGTAGATATTTTATCACGTTATCAAGAATTAGCTCATTCAATAGGTGTTACAATTGAAAATC
AATTGACAGATGCTACCAGGGTCGTCATGAGTCTTAGGGCATTGGATAAGGTTTTGACAAACCTGATTAGTAATGCAATTAA
ATATTCAGATAAAAATGGGCGTGTAATCATATCCGAGCAAGATGGCTATCTCTCTATCAAAAATACATGTGCGCCTCTAAGT
GACCAAGAACTAGAACATTTATTTGATATATTCTATCATTCTCAAATCGTGACAGATAAGGATGAAAGTTCCGGTTTGGGTCT
TTACATTGTGAATAATATTTTAGAAAGCTATCAAATGGATTATAGTTTTCTCCCTTATGAACACGGTATGGAATTTAAGATTA
GCTTGTAG

4106.6 (SEQ. ID. NO. 214)
ATGTATTTAGGAGATTTGATGGAGAAAGCCGAGTGTGGTCAATTTTCAATACTTTCCTTTCTATTACAAGAGTCTCAGACGAC
CGTCAAGGCTGTAATGGAAGAAACAGGATTTTCAAAAGCAACCCTAACCAAATATGTCACCCTGCTCAATGACAAGGCTTTG
GATAGTGGCTTAGAGCTGGCTATTCACTCAGAAGATGAAAATCTGCGTCTGTCTATCGGTGCAGCTACCAAGGGGAGAGATA
TTCGGAGCTTGTTTTTGGAGAGTGCTGTTAAATACCAGATTTTGGTTTATCTTCTCTACCACCAACAGTTTTTAGCCCATCAGC
TGGCTCAAGAATTGGTGATTAGCGAGGCTACGCTTGGTCGTCACTTGGCTGGTTTAAATCAGATTTTGTCAGAATTTGATTTA
TCCATCCAAAATGGCCGTTGGCGAGGTCCAGAGCATCAGATTCACTATTTCTATTTCTGTCTTTTCCGAAAGGTCTGGTCGAG
TCAGGAATGGGAAGGTCACATGCAGAAACCAGAGAGAAAACAGGAGATTGCCAATTTAGAGGAAATCTGCGGTGCAAGTTT
GTCTGCGGGGCAGAAATTGGACTTGGTTCTCTGGGCTCACATCAGTCAACAACGTCTTCGGGTCAATGCTTGTCAGTTTCAAG
TCATAGAAGAGAAAATGCGAGGGTATTTTGACAATATCTTTTATCTTCGTTTGCTGAGAAAGGTTCCGTCCTTTTTTGCTGGG
CAACATATTCCACTAGGAGTTGAGGATGGTGAGATGATGATATTCTTCTCTTTTCTCCTATCTCATCGCATTCTTCCTCTTCAT

ACTATGGAGTATATTCTTGGTTTTGGAGGGCAGTTGGCAGATTTACTGACGCAATTGATTCAAGAAATGAAGAAGGAGGAAC
TATTGGGGGATTATACAGAGGACCATGTCACCTATGAACTCAGTCAGCTTTGTGCTCAAGTCTATCTCTATAAGGGCTATATT
TTACAGGATCGCTACAAGTACCAGTTAGAGAATCGTCATCCATATTTACTGATGGAACATGATTTTAAAGAGACAGCAGAGG
AGATTTTTCATGCTCTACCTGCTTTTCAACAGGGGACAGATTTAGATAAGAAGATTCTCTGGGAATGGCTCCAGTTAATCGAA
TATATGGCTGAAAACGGTGGCCAGCATATGCGGATTGGTCTGGATTTGACATCTGGTTTTCTTGTCTTTTCAAGGATGGCAGC
CATTTTGAAACGGTATTTGGAATACAATCGTTTTATTACCATTGAAGCTTATGACCCTAGTCGGCATTATGATTTGCTGGTTAC
CAATAACCCGATTCATAAGAAGGAACAGACACCAGTCTATTATTTAAAAAATGACTTGGATATGGAGGATTTGGTAGCGATT
CGCCAGTTATTATTCACTTAA

4106.7 (SEQ. ID. NO. 215)
ATGGAATTTTCAAAGAAAACACGTGAATTGTCAATTAAAAAAATGCAGGAACGTACCCTGGACCTCTTGATTATCGGTGGAG
GAATCACAGGAGCTGGTGTAGCCTTGCAGGCGGCAGCTAGCGGTCTTGAGACTGGTTTGATTGAAATGCAAGACTTTGCAGA
AGGAACATCTAGTCGTTCAACAAAATTGGTTCACGGAGGACTTCGTTACCTCAAACAATTTGACGTAGAAGTGGTCTCAGAT
ACGGTTTCTGAACGTGCAGTGGTTCAACAAATCGCTCCACACATTCCAAAATCAGATCCAATGCTCTTACCAGTTTACGATGA
AGATGGAGCAACCTTTAGCCTCTTCCGTCTTAAAGTAGCCATGGACTTGTACGACCTCTTGGCAGGTGTTAGCAACACACCAG
CTGCGAACAAGGTTTTGAGCAAGGATCAAGTCTTGGAACGCCAGCCAAACTTGAAGAAGGAAGGCTTGGTAGGAGGTGGAG
TGTATCTTGACTTCCGTAACAACGATGCGCGTCTCGTGATTGAAAACATCAAACGTGCCAACCAAGACGGTGCCCTCATTGCC
AACCACGTGAAGGCAGAAGGCTTCCTCTTTGACGAAAGTGGCAAGATTACAGGTGTTGTAGCTCGTGATCTCTTGACAGACC
AAGTGTTTGAAATCAAGGCCCGTCTGGTTATTAATACAACAGGTCCTTGGAGTGATAAAGTACGTAATTTGTCTAATAAGGG
AACGCAATTCTCACAAATGCGCCCAACTAAGGGAGTTCACTTGGTAGTAGATTCAAGCAAAATCAAGGTTTCACAGCCAGTT
TACTTCGACACAGGTTTGGGTGACGGTCGTATGGTCTTTGTTCTCCCACGTGAAAACAAGACTTACTTTGGTACAACTGATAC
AGACTACACAGGTGATTTGGAGCATCCAAAAGTAACTCAAGAAGATGTAGATTATCTACTTGGCATTGTCAACAACCGCTTC
CCAGAATCCAACATCACCATTGATGATATCGAAAGCAGCTGGGCAGGTCTTCG
TCCATTGATTGCAGGGAACAGTGCCTCTGACTATAATGGTGGAAATAACGGTACCATCAGTGATGAAAGCTTTGACAACTTG
ATTGCGACTGTTGAATCTTATCTCTCCAAAGAAAAAACACGTGAAGATGTTGAGTCTGCTGTCAGCAAGCTTGAAAGTAGCA
CATCTGAGAAACATTTGGATCCATCTGCAGTTTCTCGTGGGTCTAGCTTGGACCGTGATGACAATGGTCTCTTGACTCTTGCT
GGTGGTAAAATCACAGACTACCGTAAGATGGCTGAAGGAGCTATGGAGCGCGTGGTTGACATCCTCAAAGCAGAATTTGAC
CGTAGCTTTAAATTGATCAATTCTAAAACTTACCCTGTTTCAGGTGGAGAATTGAACCCAGCAAATGTGGATTCAGAAATCG
AAGCCTTTGCGCAACTTGGAGTATCACGTGGTTTGGATAGCAAGGAAGCTCACTATCTGGCAAATCTTTACGGTTCAAATGC
ACCGAAAGTCTTTGCACTTGCTCACAGCTTGGAACAAGCGCCAGGACTCAGCTTGGCAGATACTTTGTCCCTTCACTATGCAA
TGCGCAATGAGTTGACTCTTAGCCCAGTTGACTTCCTTCTTCGTCGTACCAATCACATGCTCTTTATGCGTGATAGCTTGGATA
GTATCGTTGAGCCAATTTTGGATGAAATGGGACGATTCTATGACTGGACAGAAGAAGAAAAAGCAACTTACCGTGCTGATGT
CGAAGCAGCTCTCGCTAACAACGATTTAGCAGAATTAAAAAATTAA

4106.8 (SEQ. ID. NO. 216)
ATGATGAATGAATTATTTGGAGAATTTCTAGGGACTTTAATCCTGATTCTTCTAGGAAATGGTGTTGTTGCAGGTGTGGTTCT
TCCTAAAACCAAGAGCAATAGCTCAGGTTGGATTGTGATTACTATGGGTTGGGGGATTGCAGTTGCGGTTGCAGTCTTTGTAT
CTGGCAAGCTCAGTCCAGCTTATTTAAACCCAGCTGTGACCATCGGTGTGGCCTTAAAAGGTGGTTTGCCTTGGGCTTCCGTT
TTGCCTTATATCTTAGCCCAGTTCGCAGGGGCCATGCTGGGTCAGATTTTGGTTTGGTTGCAATTCAAACCTCACTATGAGGC
AGAAGAAAATGCAGGCAATATCCTGGCAACCTTCAGTACTGGACCAGCCATCAAGGATACTGTATCAAACTTGATTAGCGAA
ATCCTTGGAACTTTTGTTTTGGTGTTGACAATCTTTGCTTTGGGTCTTTACGACTTTCAGGCAGGTATCGGAACCTTTGCAGTG
GGAACTTTGATTGTCGGTATCGGTCTATCACTAGGTGGGACAACAGGTTATGCCTTGAACCCAGCTCGTGACCTTGGACCTCG
TATCATGCACAGCATCTTGCCAATTCCAAACAAGGGAGACGGAGACTGGTCTTACGCTTGGATTCCTGTTGTAGGCCCTGTTA
TCGGAGCAGCCTTGGCAGTGCTTGTATTCTCACTTTTCTAG

4106.10 (SEQ. ID. NO. 217)
ATGAAAAGGACCTGGAGGAACTCATTCGTGACAAATCTTAATACACCTTTTATGATTGGCAATATTGAGATTCCCAATCGTAC
CGTTTTAGCGCCTATGGCTGGCGTGACCAACTCAGCCTTTCGTACTATCGCAAAGGAGCTCGGAGCTGGACTCGTTGTAATGG
AAATGGTCTCTGACAAGGGAATCCAATACAACAACGAAAAAACCCTGCACATGCTTCATATCGATGAGGGCGAAAACCCTG
TCTCTATCCAACTTTTTGGTAGCGATGAAGACAGCCTAGCACGCGCAGCAGAATTCATCCAAGAAAACACCAAGACCGATAT
CGTCGATATCAACATGGGCTGCCCTGTCAACAAAATCGTGAAGAACGAAGCTGGTGCTATGTGGCTCAAGGATCCAGACAAG
ATTTACTCCATCATCAACAAGGTCCAGTCTGTCCTTGATATCCCACTTACTGTCAAAATGCGTACCGGCTGGGCGGACCCATC
TCTTGCAGTAGAAAATGCTCTCGCTGCTGAAGCTGCAGGTGTTTCTGCCCTCGCCATGCATGGCCGTACCCGTGAACAAATGT
ATACTGGCCACGCAGACCTTGAGACCCTTTACAAGGTTGCCCAAGCTCTAACCAAGATTCCATTCATCGCCAACGGTGATATC
CGTACTGTCCAAGAAGCCAAGCAACGCATCGAAGAAGTTGGTGCTGACGCAGTCATGATTGGCCGAGCTGCCATGGGAAAT
CCTTACCTCTTCAACCAAATCAACCATTACTTTGAAACAGGAGAAATCCTACCTGATTTGACCTTTGAAGACAAGATGAAGAT
CGCCTACGAACACTTGAAACGATTGATTAACCTCAAAGGAGAAAACGTCGCAGTTCGTGAATTCCGCGGTCTCGCTCCTCAC
TATCTCCGTGGAACATCTGGCGCTGCCAAACTCCGTGGAGCCATTTCGCAAGCCAGCACCCTGGCAGAGATTGAAACCCTCT
TGCAATTGGAGAAGGCTTAA

4107.1 (SEQ. ID. NO. 218)
ATGACAAAGAAGAAAATTGAGCGTATTTCTGTAATACACCGAGAAAAGATTTTATGGCTCAAGTGGTATTTCATGCGAGATA
AAGAACAACCTAAGTATAGTGTCCTTGAGCGTAAAATGTTTGATGCTGCTAAAAATCAAGATATGCTAGCTTATCAAAAATA
CGCAACTATCAAGCAGATAACAGATATTAGGGTACAAACAAGTGAGGCTGACATTTTAGAGGCTGTAAAAGAGGTTTATGTG
TACAATCACATGAATGTTATCGGAGCTTGTCAGCGGATATTATTTATCAGTCAATCACCAGCTTATGATAAGTTAAATAAGTG
GTTTAATATCTATTCTGATTTGTATTTTAGCGTTGTACCCTTGCCCAAAATGGGGGTATATCATGAGATGGTAGGTATCTAG

4107.2 (SEQ. ID. NO. 219)
ATGAAAAATTCCAACGAGGCTGAGATGAAATTACTTTATACTGATATTCGGACTTCTTTGACAGAAATTCTAACAAGAGAGG
CAGAAGAGCTAGTTGCAGCTGGCAAGCGGGTCTTCTACATTGCCCCCAACTCTCTTTCTTTTGAAAAGGAACGCGCCGTGCTG
GAATACTTGTCCCAGCAGGCTTCTTTTTCGATTACCGTCACGCGCTTTGCTCAAATGGCTCGCTATCTGGTCTTGAATGATTTA
CCAGCTAAAACTACTCTTGATGATATCGGTCTTGGGTTGGCCTTTTACAAATGCCTTGCCGAACTCGATCCCAAGGACTTGCG

TGTTTATGGCGCTATTAAGCAGGATCCTCAATTGATCCAGCAGTTAATTGAGCTTTACCATGAGATGACCAAATCTCAGATGA
GTTTTTTGGACTTGGAGAATTTAACAGATGAGGATAAGAGGGCGGATTTACTCTTGATTTTTGAGAAAGTAACAGCCTATCTT
AATCAAGGTCAGTTAGCCCAGGAAAGTCAGTTGTCCCATTTGATTGAGGCTATTGAGAATGACAAGGTAAGTAGTGATTTTA
ATCAAATCGCCTTGGTCATTGACGGCTTTACTCGTTTTTCTGCTGAGGAAGAGCGGGTTGTGGACTTACTTCACGGCAAAGGT
GTTGAGATTGTTATCGGGGCTTATGCTAGTAAGAAAGCCTATACCAGTCCTTTTAGCGAGGGCAATCTCTACCAAGCCAGCGT
AAAATTTCTCCATCATCTGGCTTCTAAATACCAAACGCCTGCTCAGGACTGTTCTCAAACTCATGAGAAGATGGATAGTTTTG
ACAAGGCCTCTCGTTTGTTGGAGTCTTCTTATGACTTTTCAGAACTCGCTTTGGATGTCGATGAGAAAGACCGTGAAAATTTA
CAAATCTGGTCTTGTTTGACGCAAAAGGAGGAGTTGGAGCTAGTAGCCCGTAGTATTCGTCAGAAATTACATGAGAACTCAG
ACCTGAGCTACAAGCATTTTCGTATTCTCTTGGGGGATGTAGCTTCTTACCAGTTATCTCTCAAAACCATTTTTGACCAGTATC
AGATTCCTTTTTATCTTGGTAGAAGCGAAGCCATGGCTCATCATCCCTTGACTCAGTTTGTCGAGTCTATTTTAGCTTTAAAAC
GTTACCGTTTTCGTCAGGAGGATTTGATTAATCTTCTTAGAACTGATTTGTATACTGACCTCAGTCAGTCTGATATTGATGCTT
TTGAGCAATATATCCGCTATCTTGGTATCAATGGCTTGCCAGCCTTTCAGCAAACCTTCACCAAATCCCACCATGGAAAATTT
AATCTTGAGCGTTTGAATGTCCTCCGCCTGAGAATTTTAGCACCTCTTGAAACCCTCTTTGCCAGCCGAAAACAAAAGGCTGA
AAAACTCCTACAAAAATGGAGTGTCTTTCTAAAAGAAGGAGCTGTGACCAAGCAGTTACAAGATTTGACAACCACTTTGGAA
GCTGTAGAACAGGAAAGACAAGCCGAAGTTTGGAAGGCTTTCTGCCATGTTTTAGAACAATTTGCGACTGTTTTTGCTGGTTC
ACAGGTTAGTCTGGAAGACTTCCTAGCCTTGCTCCATTCTGGAATGAGTTTGTCCCAATACCGTACCATTCCAGCAACAGTGG
ACACTGTTCTGGTGCAGAGTTACGATTTGATTGCACCATTGACTGCTGACTTTGTCTATGCTATTGGACTAACTCAGGACAAT
TTACCAAAAATTTCTCAAAACACCAGTCTTCTGACAGATGAAGAAAGGCAAAACCTAAACCAAGCGACCGAAGAAGGCGTT
CAATTACTGATTGCCAGCAGTGAAAATCTCAAGAAAAATCGCTACACTATGCTTTCCTTGGTCAATTCTGCTCGTAAGCAGTT
GTTCTTGTCGGCTCCAAGCCTTTTTAACGAAAGTGAAAGTAAGGAATCTGCCTATCTTCAAGAGTTGATCCATTTTGGATTTA
GGCGGAGAGAGAAGAGGATGAATCACAAAGGACTGTCTAAGGAGGATATGGGGTCCTATCACAGTCTTTTGTCTAGTCTGGT
TGCCTATCACCAGCAGGGTGAGATGAGCGATACTGAGCAAGATTTGACTTTTGTCAAGGTTCTGTCGCGTGTCATAGGTAAA
AAACTAGATCAGCAAGGTCTGGAAAATCCAGCTATCCCAACCAGTCCAAGCAGCAAGACCTTAGCCAAGGACACCTTGCAA
GCTCT
CTATCCTGCCAAACAGGAGTTTTACCTGTCTACGTCGGGTTTGACAGAGTTTTATCGCAATGAATACAGTTATTTCCTACGCT
ACGTTTTAGGCTTGCAGGAGGAATTACGTTTGCATCCTGATGCCCGTAGTCACGGGAATTTCTTGCATCGTATCTTTGAACGC
GCCTTACAGTTGCCTAATGAAGATTCCTTTGACCAACGTCTAGAACAAGCTATTCAAGAAACCAGTCAAGAACGCGAATTTG
AAGCTATTTATCAAGAAAGTTTGGAAGCCCAGTTTACCAAGGAAGTTTTGCTTGATGTTGCACGGACAACTGGACATATTCTC
CGACACAATCCAGCCATCGAAACCATCAAAGAAGAAGCAAATTTTGGTGGAAAAGACCAAGCCTTTATTCAATTAGACAAT
GGACGCAGTGTCTTTGTACGAGGCAAGGTGGACCGGATTGACCGTTTGAAAGCTAATGGAGCGATAGGAGTAGTAGACTAC
AAATCCAGTCTGACTCAGTTCCAGTTTCCTCATTTCTTTAATGGGCTCAATTCTCAGTTACCAACCTATCTTGCTGCCCTAAAA
AGAGAAGGGGAGCAGAACTTTTTCGGCGCCATGTACTTGGAAATGGCTGAACCTGTCCAATCTCTGATGGCGGTAAAAAGTC
TGGCAGGAGCAGTGGTAGAAGCCAGCAAATCTATGAAATACCAAGGGCTCTTCTTGGAAAAAGAAAGCAGTTATTTAGGCG
AATTTTATAACAAAAACAAGGCTAATCAACTGACAGATGAGGAATTTCAGCTCCTACTGGACTACAATGCCTATCTTTACAA
GAAAGCTGCTGAGAAGATTTTAGCAGGCCGGTTCGCCATCAATCCTTATACTGAAAATGGCAGAAGCATTGCCCCATACGTC
CAGCAACATCAGGCTATTACAGGCTTTGAAGCCAATTACCATCTGGGCCAAGCCCGTTTCCTAGAAAAGTTGGACCTAGCTG
ATGGCAAGCGTCTGGTCGGAGAAAAACTCAAGCAAGCTTGGCTTGAAAAAATAA
GAGAGGAGTTGAATCGATGA

4107.3 (SEQ. ID. NO. 220)
ATGAAGCTTATTCCCTTTTTAAGTGAGGAGGAGATTCAAAAACTGCAAGAAGCAGAAGCAAATTCGAGCAAGGAACAGAAG
AAAACTGCCGAGCAAATCGAAGCTATCTACACTTCTGCCCAGAATATCCTGGTCTCAGCATCGGCTGGTTCTGGAAAGACCT
TTGTCATGGCAGAGCGCATTCTGGACCAATTGGCGCGTGGTGTCGAAATTTCTCAACTCTTTATCTCAACCTTTACCGTCAAG
GCTGCAACTGAACTTAAAGAACGTTTAGAGAAAAAAATCAGCAAGAAAATCCAAGAAACAGATGATGTCGACCTCAAACAA
CACTTGGGTCGCCAGTTGGCAGACCTACCCAACGCTGCCATTGGAACCATGGATTCTTTCACACAAAAATTCCTTGGCAAAC
ATGGTTATCTGCTTGATATTGCACCTAATTTCCGTATTTTACAAAACCAAAGCGAGCAACTTATTCTCGAAAACGAAGTCTTT
CATGAGGTCTTTGAAGCGCATTACCAAGGTAAACAGAAAGAGACCTTTAGTCATTTGCTGAAAAACTTTGCTGGGCGTGGCA
AGGACGAACGGGGTCTGCGCCAGCAGGTCTATAAAATCTATGACTTCCTCCAATCCACCAGTAATCCTCAAAAGTGGCTGAG
TGAATCTTTCCTCAAAGGATTTGAGAAAGCTGATTTTACCAGTGAAAAAGAAAAACTGACCGAGCAAATCAAACAAGCCCTT
TGGGATTTGGAAAGCTTTTTCCGTTACCATCTGGATAACGATGCCAAGGAGTTTGCAAAGGCTGCCTATTTAGAAAATGTTCA
GTTAATTCTGGATGAAATTGGCTCCCTAAATCAGGAGTCCGATAGTCAGGCTTATCAGGCAGTGCTTGCGCGTGTTGTCGCCA
TCTCTAAGGAGAAAAACGGTCGAGCTCTGACTAATGCCAGCCGTAAGGCTGATTTGAAGCCCCTGGCTGATGCCTACAACGA
AGAGAGAAAGACCCAGTTTGCTAAACTAGGACAATTATCAGACCAGATAGCGAT
TCTCGACTATCAAGAACGTTATCATGGAGACACTTGGAAACTAGCTAAAACCTTCCAATCTTTCATGAGCGATTTTGTAGAGG
CTTATCGTCAGAGAAAACGACAGGAAAATGCCTTCGAATTCGCTGATATCAGCCATTACACCATTGAGATTTTAGAGAATTT
CCCACAAGTTCGTGAGTCTTATCAGGAGCGCTTCCATGAAGTCATGGTCGATGAGTATCAGGATACCAACCATATTCAAGAA
CGGATGCTGGAATTGTTGTCTAATGGCCACAATCGCTTTATGGTGGGAGATATCAAGCAATCCATCTATCGTTTCCGTCAGGC
AGACCCGCAGATTTTCAATGAGAAATTCCAACGCTATGCGCAAAATCCCCAAGAAGGCAGGCTCATTATCCTCAAGGAAAAT
TTCCGTAGTAGTTCAGAAGTGCTGTCAGCAACCAATGATGTCTTTGAACGTCTCATGGACCAAGAGGTCGGCGAAATCAACT
ATGATAACAAGCACCAGCTTGTTTTTGCCAATACCAAACTGACTCCCAATCCAGACAACAAGGCAGCATTTCTCCTCTACGAC
AAGGACGATACAGGTGAGGAAGAAGAGAGTCAAACAGAAACGAAACTAACAGGCGAAATGCGCTTAGTTATCAAGGAGAT
TCTGAAACTTCATCAAGAAAAAGGTGTTGCCTTTAAGGAAATTGCCCTTCTGACCTCCAGCCGCAGTCGTAATGACCAGATTC
TCCTCGCCCTGTCTGAGTACGGAATTCCTGTCAAAACTGACGGAGAGCAAAACAATTATCTCCAATCCCTAGAAGTGCAAGT
CATGCTAGACACTCTTCGTGTCATTCACAATCCCCTGCAAGACTACGCCTTGGTTGCCCTTATGAAGTCTCCAATGTTTGGTTT
TGATGAGGATGAGCTAGCACGTTTGTCCCTTCAGAAAGCAGAGGATAAAGTCCACGAAAATCTCTATGAGAAACTGGTCAAT
GCACAAAAAAATGGCAAGTAGTCAAAAAGGCTTGATTCACACAGCTCTAGCTG
AAAAACTAAAGCAATTCATGGATATCCTAGCTTCTTGGCGCTTGTATGCCAAAACCCACTCTCTCTATGACTTGATTTGGAAG
ATTTACAACGACCGTTTTTATTATGACTATGTTGGGGCTTTGCCGAATGGTCCTGCTAGGCAGGCCAATCTCTATGCCCTAGC
ACTGCGTGCTGATCAATTTGAAAAGAGCAATTTCAAAGGTTTGTCGCGTTTTATTCGTATGATTGACCAAGTCTTAGAAGCCC
AGCACGATTTGGCAAGCGTGGCCGTCGCACCGCCAAAAGATGCAGTAGAGCTCATGACCATCCACAAGAGTAAAGGGCTGG
AGTTTCCTTACGTCTTTATCCTCAATATGGATCAAGATTTCAACAAGCAAGACTCTATGTCAGAAGTCATTCTCAGTCGTCAG
AATGGTCTTGGTGTCAAATATATTGCCAAGATGGAGACAGGGGCAGTAGAAGACCACTATCCTAAAACCATCAAACTCTCCA
TTCCTAGTCTGACCTATAGGCAGAACGAAGAGGAATTACAGCTAGCAAGCTATTCTGAGCAGATGCGTTTGCTGTATGTTGCT
ATGACGCGGGCTGAGAAAAAGCTCTATCTTGTCGGCAAGGGTTCTCGTGAAAAGCTGGAATCCAAGGAATACCCAGCAGCC
AAAAATGGGAAACTAAATAGCAATACTAGACTGCAAGCACGGAATTTCCAAGATTGGCTTTGGGCTATCAGTAAAGTGTTTA

CTAAGGACAAGCTCAACTTTAGTTATCGTTTTATTGGCGAAGATCAGTTGACCAGAGAAGCTATCGGAGAGTTGGAAACCAA
GAGTCCTCTCCAAGATAGCTCCCAAGCAGACAATCGTCAGTCAGATACCATCAAAGAAGCTCTGGAAATGCTGAAGGAGGT
GGAAGTTTATAATACTCTTCACCGCGCAGCTATTGAACTTCCTAGTGTTCAAACCCCAAGTCAAATCAAGAAATTCTACGAAC
CAGTTATGGATATGGAAGGTGTCGAGATTGCTGGTCAAGGTCAGTCAGTAGGCAAGAAAATCAGCTTCGATTTGCCAGATTT
TTCAACCAAAGAAAAGGTAACTGGAGCTGAGATTGGTAGTGCTACTCACGAACTCATGCAGAGAATTGACCTCAGCCAGCA
ACTAACCCTTGCTAGCCTAACAGAAACACTCAAACAAGTTCAAACTAGCCAAGCTGTCAGAGACAAGATCAATCTTGATAAA
ATTCTTGCTTTCTTTGACACAGTACTCGGTCAGGAAATTCTTGCTAATACCGACCATCTTTATCGCGAGCAACCTTTCTCCATG
CTCAAACGAGACCAAAAGAGTCAGGAAGACTTTGTTGTCCGTGGTATCCTTGATGGCTATCTGCTTTACGAAAACAAAATTG
TTCTGTTCGACTACAAGACAGACCGCTATGATGAACCAAGTCAACTCGTAGACCGCTATCGTGGTCAGTTAGCTCTATACGA
AGAGGCTTTATCACGAGCCTATTCGATTGAAAATATTGAAAAATACTTGATTTTACTCGGTAAAGACGAGGTTCAAGTTGTA
AAAGTATAA

4109.1 (SEQ. ID. NO. 221)
ATGGAACTTGCTCGCCATGCTGAAAGCTTGGGAGTAGATGCTATTGCAACGATTCCACCAATTTATTTCCGCTTGCCAGAATA
CTCAGTTGCCAAATACTGGAACGATATCAGTTCTGCAGCTCCAAACACAGACTACGTGATTTACAACATTCCTCAATTGGCAG
GGGTTGCTTTGACTCCAAGCCTTTACACAGAAATGTTGAAAAATCCTCGTGTTATCGGTGTGAAGAACTCTTCTATGCCAGTT
CAAGATATCCAAACCTTTGTCAGCCTTGGTGGAGAAGACCATATCGTCTTTAATGGTCCTGATGAGCAGTTCCTAGGAGGAC
GCCTCATGGGGGCTAGGGCTGGTATCGGTGGTACTTATGGTGCTATGCCAGAACTCTTCTTGAAACTCAATCAGTTGATTGCG
GATAAGGACCTAGAAACAGCGCGTGAATTGCAGTATGCTATCAACGCAATCATTGGTAAACTCACTTCTGCTCATGGAAATA
TGTACGGTGTCATCAAAGAAGTCTTGAAAATCAATGAAGGCTTGAATATTGGATCTGTTCGTTCACCATTGACACCAGTGACT
GAAGAAGATCGTCCAGTTGTAGAAGCGGCTGCTGCCTTGATTCGTGAAACCAAGGAGCGCTTCCTCTAA

4110.2 (SEQ. ID. NO. 222)
ATGTATAAGACAAAGTGTTTACGAGAGAAGTTAGTATTATTTTTAAAAATTTTCTTCCCAATCCTGATCTACCAATTTGCCAA
TTATTCTGCCTCTTTTGTTGATACTGCAATGACAGGTCAATACAACACTATGGACTTGGCTGGTGTATCTATGGCAACCAGTA
TCTGGAATCCTTTCTTTACATTTCTAACAGGGATTGTGTCAGCCTTGGTGCCTATCATTGGTCACCATCTTGGTCGAGGCAAAA
AGGAAGAAGTTGCGTCTGATTTTTACCAATTTATTTATTTGGCCTTGGGCCTATCTGTGGTCTTGCTGGGGATGGTACTTTTCT
TGGCACCAATAATCTTGAATCATATTGGGTTAGAAGCAGCAGTAGCGGCAGTAGCGGTTCGCTATCTTTGGTTTTTATCTATC
GGGATTATCCCCTTGTTGCTCTTTAGCGTCATTCGTTCCTTGCTGGATTCGCTGGGCTTGACCAAACTGTCCATGTACCTCATG
CTTTTGTTACTCCCTCTCAATAGCGGATTTAACTATCTCTTGATTTACGGTGCCTTTGGTGTTCCAGAACTGGGAGGGGCTGGT
GCTGGTTTAGGAACATCCTTGGCCTACTGGGTCTTGCTTGGGATTTCTGTTCTGGTTTTATTTAAACAGGAGAAGCTCAAAGC
CTTACACCTTGAGAAACGAATTCCACTTAATATGGATAAAATTAAGGAAGGAGTTCGTTTAGGTCTGCCTATTGGGGGAACT
GTCTTCGCGGAAGTGGCTATCTTTTCAGTGGTTGGCTTGATTATGGCTAAGTTTTCGCCCTTGATTATAGCTAGTCACCAGTCA
GCTATGAACTTTTCAAGTCTTATGTACGCCTTTCCTATGAGTATCTCATCGGCTATGGCTATTGTCGTTTCCTATGAAGTGGGA
GCCAAGCGATTTGATGATGCGAAAACCTATATTGGTCTAGGAAGATGGACTGCCCTCATTTTTGCGGCCTTCACCTTAACCTT
CCTTTACATTTTTAGGGGAAATGTGGCCAGTCTTTATGGTAACGACCCAAAATTTATCGATTTGACAGTGCGTTTTTTAACTTA
TAGTCTTTTCTTCCAGTTAGCAGATACCTTTGCGGCGCCGCTTCAGGGAATTTTGCGGGGGTATAAGGATACAGTTATTCCTTT
TTACCTTGGTTTGCTTGGTTATTGGGGCGTAGCAATCCCTGTGTACGCTATTTGA

4112.2 (SEQ. ID. NO. 223)
ATGAGTACTTTAGCAAAAATAGAAGCGCTCTTGTTTGTAGCGGGTGAAGATGGGATTCGGGTCCGCCAGTTAGCTGAACTCC
TCTCTCTGCCACCGACAGGCATCCAGCAAAGTTTAGGAAAATTAGCCCAGAAGTATGAAAAGGACCCAGATTCCAGTTTGGC
TTTGATTGAGACAAGTGGTGCTTATAGATTGGTGACCAAGCCTCAATTTGCAGAGATTTTGAAGGAATACTCTAAGGCGCCT
ATCAACCAGAGCTTGTCTCGGGCTGCCCTTGAGACCTTGTCCATTATTGCCTACAAACAGCCGATTACGCGGATAGAAATTGA
TGCCATCCGTGGAGTTAACTCGAGTGGAGCCTTGGCAAAGTTGCAGGCTTTTGACCTGATAAAGGAAGACGGGAAAAAGGA
AGTATTGGGGCGCCCCAACCTCTATGTGACTACGGATTATTTCCTAGATTACATGGGGATAAACCATTTAGAAGAATTACCA
GTGATTGATGAGCTTGAGATTCAAGCCCAAGAAAGCCAATTATTTGGTGAAAGGATAGAAGAAGATGAGAATCAATAA

4113.1 (SEQ. ID. NO. 224)
ATGGATACGATGATTAGTAGATTTTTTCGCCATTTATTTGAAGCCTTAAAAAGTTTGAAACGAAATGGTTGGATGACAGTAGC
TGCTGTCAGTTCAGTCATGATTACTTTGACCTTGGTGGCAATATTTGCATCTGTTATTTTCAATACAGCGAAACTAGCTACAG
ATATTGAAAATAATGTCCGTGTAGTAGTTTATATCCGAAAGGATGTGGAAGATAATAGTCAGACAATTGAAAAAGAAGGTCA
AACTGTTACAAATAATGACTACCACAAGGTATATGATTCTTTGAAGAACATGTCTACGGTTAAAAGTGTTACCTTTTCAAGTA
AAGAAGAACAATATGAAAAATTAACCGAGATAATGGGAGATAACTGGAAAATCTTTGAAGGAGATGCCAATCCTCTCTATG
ATGCCTATATTGTAGAGGCAAACACTCCAAATGATGTAAAAACTATAGCCGAAGATGCTAAAAAAAATTGAAGGTGTCTCTGA
GGTTCAAGATGGCGGTGCCAATACAGAAAGACTCTTCAAGTTAGCTTCATTTATCCGTGTTTGGGGACTAGGGATTGCTGCTT
TGTTAATTTTTATCGCAGTTTTCTTGATTTCAAATACCATTCGTATTACCATTATTTCCCGCAGTCGCGAAATTCAAATCATGC
GCTTGGTCGGAGCTAAAAACAGTTATATCCGTGGACCGTTCTTGTTAGAAGGAGCCTTTATCGGTTTATTGGGAGCTATCGCA
CCATCTGTTTTGGTCTTTATTGTTTATCAAATTGTTTACCAATCTGTCAACAAATCGTTGGTAGGGCAAAATCTATCCATGATT
AGTCCAGATTTATTTAGTCCGTTGATGATTGCCCTACTATTTGTGATTGGGGTTTTCATTGGTTCATTGGGATCAGGAATATCC
ATGCGCCGATTCTTGAAGATTTAG

4117.1 (SEQ. ID. NO. 225)
ATGAAGAAAGTAAGATTTATTTTTTTAGCTCTGCTATTTTTCTTAGCTAGTCCAGAGGGTGCAATGGCTAGTGATGGTACTTG
GCAAGGAAAACAGTATCTGAAAGAAGATGGCAGTCAAGCAGCAAATGAGTGGGTTTTTGATACTCATTATCAATCTTGGTTC
TATATAAAAGCAGATGCTAACTATGCTGAAAATGAATGGCTAAAGCAAGGTGACGACTATTTTTACCTCAAATCTGGTGGCT
ATATGGCCAAATCAGAATGGGTAGAAGACAAGGGAGCCTTTTATTATCTTGACCAAGATGGAAAGATGAAAAGAAATGCTT
GGGTAGGAACTTCCTATGTTGGTGCAACAGGTGCCAAAGTAATAGAAGACTGGGTCTATGATTCTCAATACGATGCTTGGTT
TTATATCAAAGCAGATGGACAGCACGCAGAGAAAGAATGGCTCCAAATTAAAGGGAAGGACTATTATTTCAAATCCGGTGG
TTATCTACTGACAAGTCAGTGGATTAATCAAGCTTATGTGAATGCTAGTGGTGCCAAAGTACAGCAAGGTTGGCTTTTTGACA
AACAATACCAATCTTGGTTTTACATCAAAGAAAATGGAAACTATGCTGATAAAGAATGGATTTTCGAGAATGGTCACTATTA
TTATCTAAAATCCGGTGGCTACATGGCAGCCAATGAATGGATTTGGGATAAGGAATCTTGGTTTTATCTCAAATTTGATGGGA
AAATGGCTGAAAAAGAATGGGTCTACGATTCTCATAGTCAAGCTTGGTACTACTTCAAATCCGGTGGTTACATGACAGCCAA
TGAATGGATTTGGGATAAGGAATCTTGGTTTTATCTCAAATCTGATGGGAAAATAGCTGAAAAAGAATGGGTCTACGATTCT
CATAGTCAAGCTTGGTACTACTTCAAATCCGGTGGTTACATGACAGCCAATGAATGGATTTGGGATAAGGAATCTTGGTTTTA

CCTCAAATCTGATGGGAAAATAGCTGAAAAAGAATGGGTCTACGATTCTCATAGTCAAGCTTGGTACTACTTCAAATCTGGT
GGCTACATGGCGAAAAATGAGACAGTAGATGGTTATCAGCTTGGAAGCGATGGTAAATGGCTTGGAGGAAAAACTACAAAT
GAAAATGCTGCTTACTATCAAGTAGTGCCTGTTACAGCCAATGTTTATGATTCAGATGGTGAAAAGCTTTCCTATATATCGCA
AGGTAGTGTCGTATGGCTAGATAAGGATAGAAAAAGTGATGACAAGCGCTTGGCTATTACTATTTCTGGTTTGTCAGGCTAT
ATGAAAACAGAAGATTTACAAGCGCTAGATGCTAGTAAGGACTTTATCCCTTATTATGAGAGTGATGGCCACCGTTTTTATCA
CTATGTGGCTCAGAATGCTAGTATCCCAGTAGCTTCTCATCTTTCTGATATGGAAGTAGGCAAGAAATATTATTCGGCAGATG
GCCTGCATTTTGATGGTTTTAAGCTTGAGAATCCCTTCCTTTTCAAAGATTTAACAGAGGCTACAAACTACAGTGCTGAAGAA
TTGGATAAGGTATTTAGTTTGCTAAACATTAACAATAGCCTTTTGGAGAACAAGGGCGCTACTTTTAAGGAAGCCGAAGAAC
ATTACCATATCAATGCTCTTTATCTCCTTGCCCATAGTGCCCTAGAAAGTAACTGGGGAAGAAGTAAAATTGCCAAAGATAA
GAATAATTTCTTTGGCATTACAGCCTATGATACGACCCCTTACCTTTCTGCTAAGACATTTGATGATGTGGATAAGGGAATTT
TAGGTGCAACCAAGTGGATTAAGGAAAATTATATCGATAGGGGAAGAACTTTCCTTGGAAACAAGGCTTCTGGTATGAATGT
GGAATATGCTTCAGACCCTTATTGGGGCGAAAAAATTGCTAGTGTGATGATGAAAATCAATGAGAAGCTAGGTGGCAAAGA
TTAG

4119.2 (SEQ. ID. NO. 226)
ATGAAAAAAGTATTACAAAAATATTGGGCATGGGCTTTTGTGGTCATCCCCCTCTTGTTACAAGCAATTTTCTTCTATGTGCC
GATGTTTCAAGGAGCCTTTTACAGTTTTACCAACTGGACAGGATTGACTTATAACTACAAATTTGTTGGCTTAAACAACTTTA
AGCTCCTCTTCATGGATCCAAAATTCATGAATGCGATTGGCTTTACCGCAATCATTGCGATTGCCATGGTGGTTGGTGAGATT
GCACTCGGGATCTTCATTGCGCGTGTCTTGAATTCTAAAATCAAAGGCCAAACCTTCTTCCGTGCTTGGTTCTTCTTCCCAGCT
GTTTTATCTGGTTTGACAGTGGCTTTGATCTTCAAGCAAGTCTTCAACTACGGTCTTCCAGCGATTGGAAATGCCCTTCATATT
GAATTTTTCCAAACCAGTCTTTTAGGGACTAAGTGGGGAGCAATCTTTGCGGCTGTCTTTGTCCTTCTTTGGCAAGGGGTGGC
TATGCCCATCATCATCTTCCTAGCTGGTTTGCAATCTATTCCAACTGAGATTACAGAGGCAGCAAGGATTGATGGTGCGACTA
GCAAGCAAGTTTTCTGGAACATTGAATTGCCTTACTTGCTACCAAGTGTCTCTATGGTCTTTATCCTAGCCCTAAAAGGTGGG
CTGACTGCCTTTGACCAAGTCTTTGCCATGACCGGTGGTGGTCCAAACAATGCCACAACCTCACTTGGGCTCTTGGTTTATAA
CTATGCCTTTAAAAACAACCAATTCGGTTATGCCAATGCCATTGCCGTAATCTTGTTCTTCTTAATTGTAGTGATTTCGATCAT
CCAATTGAGAGTATCTAAGAAATTTGAAATTTAA

4119.3 (SEQ. ID. NO. 227)
ATGATGAAACAAGATGAAAGAAAAGCCCTGATTGGCAAATACATTCTATTGATTCTAGGATCGGTTCTGATTTTAGTGCCGC
TCCTTGCTACCCTCTTTAGTTCCTTCAAACCCACTAAGGATATTGTAGATAATTTCTTTGGCTTTCCAACCAACTTCACATGGG
ACAACTTTAGCCGTCTCTTAGCTGATGGGATTGGAGGCTATTATTGGAACTCTGTCGTCATCACTGTCTTGTCTTTACTTGCAG
TAATGATCTTTATCCCTATGGCAGCCTACTCCATCGCTCGCAATATGAGTAAAAGAAAAGCCTTTACCATCATGTATACCCTC
TTAATCCTCGGAATCTTCGTACCTTTCCAAGTCATCATGATTCCGATTACGGTTATGATGAGTAAACTCGGTTTGGCTAATACC
TTTGGTTTGATCTTGCTCTACTTGACCTATGCGATTCCACAGACCCTCTTTCTCTATGTTGGCTATATCAAAATCTCGATTCCA
GAAAGTCTGGATGAAGCAGCAGAGATCGATGGGGCTAATCAATTTACAACCTATTTCCGCATCATCTTCCCAATGATGAAAC
CGATGCATGCGACAACCATGATCATCAATGCCCTTTGGTTCTGGAATGACTTCATGTTGCCACTCCTTGTCTTGAACCGGGAT
TCCAAAATGTGGACTCTGCCTTTGTTCCAATACAACTACGCAGGCCAATATTTCAACGACTACGGACCAAGCTTTGCCTCTTA
CGTGGTCGGCATTATCAGTATCACCATTGTCTATCTCTTCTTCCAACGCCATATCATTTCAGGAATGAGCAACGGGGCAGTGA
AGTAA

4119.4 (SEQ. ID. NO. 228)
ATGAAAAGTATTCTTCAGAAAATGGGGGAGCATCCGATGCTGCTTCTTTTTCTTAGCTATAGTACTGTTATATCCATTCTTGCA
CAAAATTGGATGGGTCTTGTGGCTTCAGTAGGAATGTTTCTATTTACTATTTTCTTTTTGCACTATCAGTCGATTTTATCCCAT
AAATTCTTTCGATTGATTTTGCAGTTTGTCTTGTTTGGTAGTGTCTTGTCAGCTGCTTTTGCCAGTTTAGAACATTTCCAAATTG
TGAAGAAATTTAACTATGCTTTTCTTTCACCCAATATGCAGGTGTGGCATCAGAACCGGGCAGAAGTGACCTTCTTTAATCCT
AATTATTATGGAATTATTTGTTGTTTCTGTATTATGATTGCTTTCTATCTGTTTACAACGACCAAGTTGAATTGGTTGAAAGTA
TTCTGTGTGATTGCAGGCTTTGTTAATCTCTTTGGTTTGAACTTTACTCAAAATCGAACTGCCTTTCCTGCTATTATCGCTGGA
GCAATTATCTATCTCTTTACGACTATTAAAAACTGGAAGGCCTTTTGGCTTAGTATTGGGGTCTTCGCGATTGGTTTGAGTTTC
CTCTTTTCTAGTGATTTGGGAGTTCGAATGGGTACTTTAGACTCTTCTATGGAAGAACGCATTTCTATCTGGGATGCTGGGAT
GGCCTTGTTTAAGCAAAATCCTTTTTGGGGTGAAGGGCCATTGACCTATATGAACTCTTATCCTCGGATACATGCTCCTTATC
ATGAACATGCCCACAGTCTTTATATTGATACGATTCTGAGTTACGGAATTGTGGGGACTATTTTATTAGTTTTGTCTTCTGTTG
CTCCTGTTCGCTTGATGATGGATATGAGTCAGGAGTCGGGGAAACGTCCGATTATCGGCCTTTATCTATCTTTCCTTACAGTG
GTTGCTGTGCACGGAATTTTTGACTTGGCTCTCTTCTGGATTCAGTCAGGCTTTATTTTCTTGCTAGTTATGTGCAGTATTCCAT
TGGAGCATCGAATGTTGGTATCGGACATGACGGATTAA

4120.1 (SEQ. ID. NO. 229)
ATGTCAAAGATGGATGTTCAGAAAATCATTGCACCGATGATGAAGTTTGTGAATATGCGTGGCATTATAGCTCTAAAAGATG
GGATGTTAGCAATTTTGCCATTGACAGTAGTTGGTAGTTTGTTCTTGATTATGGGACAATTGCCGTTCGAAGGATTAAATAAG
AGCATTGCTAGTGTTTTTGGAGCTAATTGGACAGAGCCGTTTATGCAAGTATATTCAGGAACTTTTGCTATTATGGGTCTAAT
TTCTTGTTTTTCAATTGCCTATTCTTATGCTAAGAATAGCGGAGTAGAGGCTTTACCAGCTGGAGTTCTATCTGTATCTGCATT
CTTTATTTTGCTAAGATCATCTTATATCCCTAAACAAGGTGAGGCGATTGGGGACGCTATTAGTAAAGTTTGGTTTGGAGGCC
AAGGAATTATCGGTGCTATCATTATAGGTTTGGTAGTAGGAAGTATTTATACCTTCTTTATAAAGAGAAAAATTGTTATTAAG
ATGCCAGAACAAGTTCCACAAGCTATTGCCAAACAGTTTGAAGCAATGATTCCAGCATTTGTAATTTTCTTATCTTCTATGAT
TGTATATATTTTAGCGAAGTCATTGACTAATGGCGGAACATTCATAGAAATGATTTATTCTGCTATTCAAGTTCCGTTGCAAG
GTTTAACTGGATCTTTGTATGGTGCTATTGGAATTGCATTCTTTATATCATTTTTGTGGTGGTTTGGTGTTCATGGGCAATCGG
TAGTAAATGGAGTAGTGACAGCTCTGCTTTTATCTAATCTTGATGCTAATAAAGCTATGTTAGCCTCTGCTAATCTATCATTA
GAAAATGGTGCACATATTGTTACTCAACAATTTTTAGATTCATTTTTAATTCTATCAGGTTCAGGGATTACGTTTGGTCTTGTA
GTTGCCATGCTTTTTGCAGCAAAATCAAAACAATACCAAGCCTTAGGAAAAGTTGCAGCTTTTCCAGCAATATTTAACGTAA
ATGAGCCAGTTGTATTTGGATTTCCGATTGTCATGAATCCAGTTATGTTTGTACCTTTCATTCTTGTTCCTGTACTTGCAGCTGT
GATAGTATATGGAGCTATTGCAACAGGTTTCATGCAGCCATTCTCAGGGGTAACATTGCCTTGGAGTACACCAGCTATTTTAT
CAGGATTTTTGGTGGGTGGATGGCAAGGAGTTATTACTCAGCTGGTGATATTAGCGATGTCTACATTGGTTTATTTTCCATTCT
TTAAAGTACAGGATCGTTTAGCTTACCAAAATGAAATCAAACAATCTTAG

4121.2 (SEQ. ID. NO. 230)

ATGAAGAAAAAGGACTTAGTAGACCAACTAGTCTCAGAGATCGAGACGGGGAAAGTCAGGACACTGGGAATATACGGTCAT
GGAGCTTCAGGTAAATCAACCTTTGCACAGGAATTGTACCAAGCTTTAGATTCTACTACAGTAAATTTGCTAGAGACAGATC
CTTATATCACCTCAGGACGCCATCTGGTAGTACCCAAGGACGCGCCGAATCAAAAGGTGACAGCCAGTCTGCCAGTGGCGCA
TGAACTGGAGAGTTTGCAGAGAGATATCCTTgCTTGCAGGCGGGTATGGATGTCTTGA

4122.1 (SEQ. ID. NO. 231)
ATGAAGAAAAGATACCTAGTCTTGACAGCTTTGCTAGCCTTGAGTCTAGCAGCTTGTTCACAAGAAAAAACAAAAAATGAAG
ATGGAGAAACTAAGACAGAACAGACAGCCAAAGCTGATGGAACAGTCGGTAGTAAGTCTCAAGGAGCTGCCCAGAAGAAA
GCAGAAGTGGTCAATAAAGGTGATTACTACAGCATTCAAGGGAAATACGATGAAATCATCGTAGCCAACAAACACTATCCA
TTGTCTAAAGACTATAATCCAGGGGAAAATCCAACAGCCAAGGCAGAGTTGGTCAAACTCATCAAAGCGATGCAAGAGGCA
GGTTTCCCTATTAGTGATCATTACAGTGGTTTTAGAAGTTATGAAACTCAGACCAAGCTCTATCAAGATTATGTCAACCAAGA
TGGAAAGGCAGCAGCTGACCGTTACTCTGCCCGTCCTGGCTATAGCGAACACCAGACAGGCTTGGCCTTTGATGTGATTGGG
ACTGATGGTGATTTGGTGACAGAAGAAAAAGCAGCCCAATGGCTCTTGGATCATGCAGCTGATTATGGCTTTGTTGTCCGTTA
TCTCAAAGGCAAGGAAAAGGAAACAGGCTATATGGCTGAAGAATGGCACCTGCGTTATGTAGGAAAAGAAGCTAAAGAAAT
TGCTGCAAGTGGTCTCAGTTTGGAAGAATACTATGGCTTTGAAGGCGGAGACTACGTCGATTAA

4125.6 (SEQ. ID. NO. 232)
ATGCGTAAATTCTTAATTATTTTGTTGCTACCAAGTTTTTTGACCATTTCAAAAGTCGTTAGCACAGAAAAAGAAGTCGTCTA
TACTTCGAAAGAAATTTATTACCTTTCACAATCTGACTTTGGTATTTATTTTAGAGAAAAATTAAGTTCTCCCATGGTTTATGG
AGAGGTTCCTGTTTATGCGAATGAAGATTTAGTAGTGGAATCTGGGAAATTGACTCCCAAAACAAGTTTTCAAATAACCGAG
TGGCGCTTAAATAAACAAGGAATTCCAGTATTTAAGCTATCAAATCATCAATTTATAGCTGCGGACAAACGATTTTTATATGA
TCAATCAGAGGTAACTCCAACAATAAAAAAAGTATGGTTAGAATCTGACTTTAAACTGTACAATAGTCCTTATGATTTAAAA
GAAGTGAAATCATCCTTATCAGCTTATTCGCAAGTATCAATCGACAAGACCATGTTTGTAGAAGGAAGAGAATTTCTACATA
TTGATCAGGCTGGATGGGTAGCTAAAGAATCAACTTCTGAAGAAGATAATCGGATGAGTAAAGTTCAAGAAATGTTATCTGA
AAAATATCAGAAAGATTCTTTCTCTATTTATGTTAAGCAACTGACTACTGGAAAAGAAGCTGGTATCAATCAAGATGAAAAG
ATGTATGCAGCCAGCGTTTTGAAACTCTCTTATCTCTATTATACGCAAGAAAAAATAAATGAGGGTCTTTATCAGTTAGATAC
GACTGTAAAATACGTATCTGCAGTCAATGATTTTCCAGGTTCTTATAAACCAGAGGGAAGTGGTAGTCTTCCTAAAAAAGAA
GATAATAAAGAATATTCTTTAAAGGATTTAATTACGAAAGTATCAAAAGAATCTGATAATGTAGCTCATAATCTATTGGGAT
ATTACATTTCAAACCAATCTGATGCCACATTCAAATCCAAGATGTCTGCCATTATGGGAGATGATTGGGATCCAAAAGAAAA
ATTGATTTCTTCTAAGATGGCCGGGAAGTTTATGGAAGCTATTTATAATCAAAATGGATTTGTGCTAGAGTCTTTGACTAAAA
CAGATTTTGATAGTCAGCGAATTGCCAAAGGTGTTTCTGTTAAAGTAG
CTCATAAAATTGGAGATGCGGATGAATTTAAGCATGATACGGGTGTTGTCTATGCAGATTCTCCATTTATTCTTTCTATTTTCA
CTAAGAATTCTGATTATGATACGATTTCTAAGATAGCCAAGGATGTTTATGAGGTTCTAAAATGA

4125.7 (SEQ. ID. NO. 233)
ATGAAAAAACAAAATAATGGTTTAATTAAAAATCCTTTTCTATGGTTATTATTTATCTTTTTCCTTGTGACAGGATTCCAGTAT
TTCTATTCTGGGAATAACTCAGGAGGAAGTCAGCAAATCAACTATACTGAGTTGGTACAAGAAATTACCGATGGTAATGTAA
AAGAATTAACTTACCAACCAAATGGTAGTGTTATCGAAGTTTCTGGTGTCTATAAAAATCCTAAAACAAGTAAAGAAGAAAC
AGGTATTCAGTTTTTCACGCCATCTGTTACTAAGGTAGAGAAATTTACCAGCACTATTCTTCCTGCAGATACTACCGTATCAG
AATTGCAAAAACTTGCTACTGACCATAAAGCAGAAGTAACTGTTAAGCATGAAAGTTCAAGTGGTATATGGATTAATCTACT
CGTATCCATTGTGCCATTTGGAATTCTATTCTTCTTCCTATTCTCTATGATGGGAAATATGGGAGGAGGCAATGGCCGTAATC
CAATGAGTTTTGGACGTAGTAAGGCTAAAGCAGCAAATAAAGAAGATATTAAAGTAAGATTTTCAGATGTTGCTGGAGCTGA
GGAAGAAAAACAAGAACTAGTTGAAGTTGTTGAGTTCTTAAAAGATCCAAAACGATTCACAAAACTTGGAGCCCGTATTCCA
GCAGGTGTTCTTTTGGAGGGACCTCCGGGGACAGGTAAAACTTTGCTTGCTAAGGCAGTCGCTGGAGAAGCAGGTGTTCCAT
TCTTTAGTATCTCAGGTTCTGACTTTGTAGAAATGTTTGTCGGAGTTGGAGCTAGTCGTGTTCGCTCTCTTTTTGAGGATGCCA
AAAAAGCAGCACCAGCTATCATCTTTATCGATGAAATTGATGCTGTTGGACGTCAACGTGGAGTCGGTCTCGGCGGAGGTAA
TGACGAACGTGAACAAACCTTGAACCAACTTTTGATTGAGATGGATGGTTTTGAGGGAAATGAAGGGATTATCGTCATCGCT
GCGACAAACCGTTCAGATGTACTTGACCCTGCCCTTTTGCGTCCAGGACGTTTTGATAGAAAAGTATTGGTTGGTCGTCCTGA
TGTTAAAGGTCGTGAAGCAATCTTGAAAGTTCACGCTAAGAATAAGC
CTTTAGCAGAAGATGTTGATTTGAAATTAGTGGCTCAACAAACTCCAGGCTTTGTTGGTGCTGATTTAGAGAATGTCTTGAAT
GAAGCAGCTTTAGTTGCTGCTCGTCGCAATAAATCGATAATTGATGCTTCAGATATTGATGAAGCAGAAGATAGAGTTATTG
CTGGACCTTCTAAGAAAGATAAGACAGTTTCACAAAAAGAACGAGAATTGGTTGCTTACCATGAGGCAGGACATACCATTGT
TGGTCTAGTCTTGTCGAATGCTCGCGTTGTCCATAAGGTTACAATTGTACCACGCGGCCGTGCAGGCGGATACATGATTGCAC
TTCCTAAAGAGGATCAAATGCTTCTATCTAAAGAAGATATGAAAGAGCAATTGGCTGGCTTAATGGGTGGACGTGTAGCTGA
AGAAATTATCTTTAATGTCCAAACCACAGGAGCTTCAAACGACTTTGAACAAGCGACACAAATGGCACGTGCAATGGTTACA
GAGTACGGTATGAGTGAAAAACTTGGCCCAGTACAATATGAAGGAAACCATGCTATGCTTGGTGCACAGAGTCCTCAAAAAT
CAATTTCAGAACAAACAGCTTATGAAATTGATGAAGAGGTTCGTTCATTATTAAATGAGGCACGAAATAAAGCTGCTGAAAT
TATTCAGTCAAATCGTGAAACTCACAAGTTAATTGCAGAAGCATTATTGAAATACGAAACATTGGATAGTACACAAATTAAA
GCTCTTTACGAAACAGGAAAGATGCCTGAAGCAGTAGAAGAGGAATCTCATGCACTATCCTATGATGAAGTAAAGTCAAAA
ATGAATGACGAAAAATAA

4125.10 (SEQ. ID. NO. 234)
ATGAGGGAACCAGATTTTTTAAATCATTTTCTCAAGAAGGGATATTTCAAAAAGCATGCTAAGGCGGTTCTAGCTCTTTCTGG
TGGATTAGATTCCATGTTTCTATTTAAGGTATTGTCTACTTATCAAAAAGAGTTAGAGATTGAATTGATTCTAGCTCATGTGA
ATCATAAGCAGAGAATTGAATCAGATTGGGAAGAAAAGGAATTAAGGAAGTTGGCTGCTGAAGCAGAGCTTCCTATTTATAT
CAGCAATTTTTCAGGAGAATTTTCAGAAGCGCGTGCACGAAATTTTCGTTATGATTTTTTTCAAGAGGTCATGAAAAAGACAG
GTGCGACAGCTTTAGTCACTGCCCACCATGCTGATGATCAGGTGGAAACGATTTTTATGCGCTTGATTCGAGGAACTCGCTTG
CGCTATCTATCAGGAATTAAGGAGAAGCAAGTAGTCGGAGAGATAGAAATCATTCGTCCCTTCTTGCATTTTCAGAAAAAAG
ACTTTCCATCAATTTTTCACTTTGAAGATACATCAAATCAGGAGAATCATTATTTTCGAAATCGTATTCGAAATTCTTACTTAC
CAGAATTGGAAAAAGAAAATCCTCGATTTAGGGATGCAATCTTAGGCATTGGCAATGAAATTTTAGATTATGATTTGGCAAT
AGCTGAATTATCTAACAATATTAATGTGGAAGATTTACAGCAGTTATTTTCTTACTCTGAGTCTACACAAAGAGTTTTACTTC
AAACTTATCTGAATCGTTTTCCAGATTTGAATCTTACAAAAGCTCAGTTTGCTGAAGTTCAGCAGATTTTAAAATCTAAAAGC
CAGTATCGTCATCCGATTAAAAATGGCTATGAATTGATAAAAGAGTACCAACAGTTTCAGATTTGTAAAATCAGTCCGCAGG
CTGATGAAAAGGAAGATGAACTTGTGTTACACTATCAAAATCAGGTAGCTTATCAAGGATATTTATTTTCTTTTGGACTTCCA

TTAGAAGGTGAATTAATTCAACAAATACCTGTTTCACGTGAAACATCCATACACATTCGTCATCGAAAAACAGGAGATGTTT
TGATTAAAAATGGGCATAGAAAAAAACTCAGACGTTTATTTATTG
ATTTGAAAATCCCTATGGAAAAGAGAAACTCTGCTCTTATTATTGAGCAATTTGGTGAAATTGTCTCAATTTTGGGAATTGCG
ACCAATAATTTGAGTAAAAAAACGAAAAATGATATAATGAACACTGTACTTTATATAGAAAAAATAGATAGGTAA

4126.1 (SEQ. ID. NO. 235)
ATGAAGCGTTCTTCTCTTTTAGTTAGAATGGTTATTTCCATCTTTCTGGTCTTTCTCATTCTCCTAGCTCTGGTTGGAACTTTCT
ACTATCAATCAAGTTCTTCAGCCATTGAGGCCACCATTGAGGGCAACAGCCAAACGACCATCAGCCAGACTAGCCACTTTAT
TCAGTCTTATATCAAAAAACTAGAAACCACCTCGACTGGTTTGACCCAGCAGACGGATGTTCTGGCCTATGCTGAGAATCCC
AGTCAAGACAAGGTCGAGGGAATCCGAGATTTGTTTTTGACCATCTTGAAGTCAGATAAGGACTTGAAAACTGTTGTGCTGG
TGACCAAATCTGGTCAGGTCATTTCTACAGATGACAGTGTGCAGATGAAAACTTCCTCTGATATGATGGCTGAGGATTGGTA
CCAAAAGGCCATTCATCAGGGAGCTATGCCTGTTTTGACTCCAGCTCGTAAATCAGATAGTCAGTGGGTCATTTCTGTCACTC
AAGAACTTGTTGATGCAAAGGGAGCCAATCTTGGTGTGCTTCGTTTGGATATTTCTTATGAAACTCTGGAAGCCTATCTCAAT
CAACTCCAGTTGGGGCAGCAGGGCTTTGCCTTCATTATCAATGAAAACCATGAATTTGTCTACCATCCTCAACACACAGTTTA
TAGTTCGTCTAGCAAAATGGAGGCTATGAAACCCTACATCGATACAGGTCAGGGTTATACTCCTGGTCACAAATCCTACGTC
AGTCAAGAGAAGATTGCAGGAACTGATTGGACGGTGCTTGGCGTGTCATCATTGGAAAAGTTAGACCAGGTTCGGAGTCAGC
TCTTGTGGACCTTGCTTGGGGCCAGTGTCACATCTCTTCTTGTCTGTCTCTGCTTAGTGTGGTTCAGTCTTAAACGCTGGATTG
CTCCTTTGAAGGATTTGAGAGAAACCATGTTGGAAATTGCTTCTGGTGCTCAAAATCTTCGTGCCAAGGAAGTTGGTGCCTAT
GAACTGAGAGAAGTAACTCGCCAATTTAATGCTATGTTGGATCAGATTGATCAGTTGATGGTAGCTATTCGTAGCCAGGAAG
AAACGACCCGTCAGTACCAACTTCAAGCCCTTTCGAGCCAGATTAATCCACATTTCCTCTATAACACTTTGGACACCATCATC
TGGATGGCTGAATTTCATGATAGTCAGCGAGTGGTGCAGGTGACCAAGTCCTTGGCAACCTATTTCCGCTTGGCGCTCAATCA
AGGCAAGGACTTGATTTGTCTCTCTGACGAAATCAATCATGTCCGCCAGTATCTCTTTATCCAGAAACAACGCTATGGAGATA
AGCTGGAATACGAAATTAATGAAAATGTTGCCTTTGATAATTTAGTCTTACCCAAGCTGGTCCTACAACCCCTTGTAGAAAAT
GCTCTTTACCATGGCATTAAGGAAAAGGAAGGTCAGGGCCATATTAAACTTTCTGTCCAGAAACAGGATTCGGGATTGGTCA
TCCGTATTGAGGATGATGGCGTTGGCTTCCAAGATGCTGGTGATAGTAGTCAAAGTCAACTCAAACGTGGGGGAGTTGGTCT
TCAAAATGTCGATCAACGGCTCAAACTTCATTTTGGAGCCAATTACCATATGAAGATTGATTCTAGACCCCAAAAAGGGACG
AAAGTTGAAATATATATAAATAGAATAGAAACTAGCTAA

4126.7 (SEQ. ID. NO. 236)
ATGAAGCGTTCTTCTCTTTTAGTTAGAATGGTTATTTCCATCTTTCTGGTCTTTCTCATTCTCCTAGCTCTGGTTGGAACTTTCT
ACTATCAATCAAGTTCTTCAGCCATTGAGGCCACCATTGAGGGCAACAGCCAAACGACCATCAGCCAGACTAGCCACTTTAT
TCAGTCTTATATCAAAAAACTAGAAACCACCTCGACTGGTTTGACCCAGCAGACGGATGTTCTGGCCTATGCTGAGAATCCC
AGTCAAGACAAGGTCGAGGGAATCCGAGATTTGTTTTTGACCATCTTGAAGTCAGATAAGGACTTGAAAACTGTTGTGCTGG
TGACCAAATCTGGTCAGGTCATTTCTACAGATGACAGTGTGCAGATGAAAACTTCCTCTGATATGATGGCTGAGGATTGGTA
CCAAAAGGCCATTCATCAGGGAGCTATGCCTGTTTTGACTCCAGCTCGTAAATCAGATAGTCAGTGGGTCATTTCTGTCACTC
AAGAACTTGTTGATGCAAAGGGAGCCAATCTTGGTGTGCTTCGTTTGGATATTTCTTATGAAACTCTGGAAGCCTATCTCAAT
CAACTCCAGTTGGGGCAGCAGGGCTTTGCCTTCATTATCAATGAAAACCATGAATTTGTCTACCATCCTCAACACACAGTTTA
TAGTTCGTCTAGCAAAATGGAGGCTATGAAACCCTACATCGATACAGGTCAGGGTTATACTCCTGGTCACAAATCCTACGTC
AGTCAAGAGAAGATTGCAGGAACTGATTGGACGGTGCTTGGCGTGTCATCATTGGAAAAGTTAGACCAGGTTCGGAGTCAGC
TCTTGTGGACCTTGCTTGGGGCCAGTGTCACATCTCTTCTTGTCTGTCTCTGCTTAGTGTGGTTCAGTCTTAAACGCTGGATTG
CTCCTTTGAAGGATTTGAGAGAAACCATGTTGGAAATTGCTTCTGGTGCTCAAAATCTTCGTGCCAAGGAAGTTGGTGCCTAT
GAACTGAGAGAAGTAACTCGCCAATTTAATGCTATGTTGGATCAGATTGATCAGTTGATGGTAGCTATTCGTAGCCAGGAAG
AAACGACCCGTCAGTACCAACTTCAAGCCCTTTCGAGCCAGATTAATCCACATTTCCTCTATAACACTTTGGACACCATCATC
TGGATGGCTGAATTTCATGATAGTCAGCGAGTGGTGCAGGTGACCAAGTCCTTGGCAACCTATTTCCGCTTGGCGCTCAATCA
AGGCAAGGACTTGATTTGTCTCTCTGACGAAATCAATCATGTCCGCCAGTATCTCTTTATCCAGAAACAACGCTATGGAGATA
AGCTGGAATACGAAATTAATGAAAATGTTGCCTTTGATAATTTAGTCTTACCCAAGCTGGTCCTACAACCCCTTGTAGAAAAT
GCTCTTTACCATGGCATTAAGGAAAAGGAAGGTCAGGGCCATATTAAACTTTCTGTCCAGAAACAGGATTCGGGATTGGTCA
TCCGTATTGAGGATGATGGCGTTGGCTTCCAAGATGCTGGTGATAGTAGTCAAAGTCAACTCAAACGTGGGGGAGTTGGTCT
TCAAAATGTCGATCAACGGCTCAAACTTCATTTTGGAGCCAATTACCATATGAAGATTGATTCTAGACCCCAAAAAGGGACG
AAAGTTGAAATATATATAAATAGAATAGAAACTAGCTAA

4127.4 (SEQ. ID. NO. 237)
ATGTTTTTTAAATTATTAAGAGAAGCTCTTAAAGTCAAGCAGGTTCGATCAAAAATTTTATTTACAATTTTTATCGTTTTGGTC
TTTCGTATCGGAACTAGCATTACAGTTCCTGGTGTGAATGCCAATAGCTTGAATGCTTTAAGTGGATTATCCTTCTTAAACAT
GTTGAGCTTGGTGTCGGGGAATGCCCTAAAAAACTTTTCGATTTTTGCCCTAGGAGTTAGTCCCTATATCACCGCTTCTATTGT
TGTCCAACTCTTGCAAATGGATATTTTACCCAAGTTTGTAGAGTGGGGTAAACAAGGGGAAGTAGGTCGAAGAAAATTGAAT
CAAGCTACTCGTTATATTGCTCTAGTTCTCGCTTTTGTGCAATCTATCGGGATTACAGCTGGTTTTAATACCTTGGCTGGAGCT
CAATTGATTAAAACTGCTTTAACTCCACAAGTTTTTCTGACGATTGGTATCATCTTAACAGCTGGTAGTATGATTGTCACTTGG
TTGGGTGAGCAAATTACAGATAAGGGATACGGAAACGGTGTTTCCATGATTATCTTTGCCGGGATTGTTTCCTCAATTCCAGA
GATGATTCAGGGCATCTATGTGGACTACTTTGTGAACGTCCCAAGTAGCCGTATCACTTCATCTATCATTTTCGTAATCATTTT
GATTATTACTGTATTGTTGATTATTTACTTTACAACTTATGTTCAACAAGCAGAATACAAAATTCCAATCCAATATACTAAGG
TTGCACAAGGTGCTCCATCTAGCTCTTACCTTCCGTTAAAAGTAAACCCTGCTGGAGTTATCCCTGTTATCTTTGCCAGTTCGA
TTACTGCAGCGCCTGCGGCTATTCTTCAGTTTTTGAGTGCCACAGGTCATGATTGGGCTTGGGTAAGGGTAGCACAAGAGATG
TTGGCAACTACTTCTCCAACTGGTATTGCCATGTATGCTTTGTTGATTATTCTCTTTACATTCTTCTATACGTTTGTACAGATTA
ATCCTGAAAAAGCAGCAGAGACCTACAAAAGAGTGGTGCCTATATCCATGGAGTTCGTCCTGGTAAAGGTACAGAAGAATA
TATGTCTAAACTTCTTCGTCGTCTTGCAACTGTTGGTTCCCTCTTCCTTGGTGTGA

4127.5 (SEQ. ID. NO. 238)
ATGGATATTAGACAAGTTACTGAAACCATCGCCATGATTGAGGAGCAAAACTTCGATATTAGAACCATTACCATGGGGATTT
CTCTTTTGGACTGTATCGATCCAGATATCAATCGTGCTGCGGAGAAAATCTATCAAAAAATTACGACAAAGGCGGCTAATTT
AGTAGCTGTTGGTGATGAAATTGCGGCTGAGTTGGGAATTCCTATCGTTAATAAGCGTGTATCGGTGACACCTATTTCTCTGA
TTGGGGCAGCGACAGATGCGACGGACTACGTGGTTCTGGCAAAAGCGCTTGATAAGGCTGCGAAAGAGATTGGTGTGGACT
TTATTGGTGGTTTTTCTGCCTTAGTACAAAAAGGTTATCAAAAGGGAGATGAGATTCTCATCAATTCCATTCCTCGCGCTTTG

GCTGAGACGGATAAGGTCTGCTCGTCAGTCAATATCGGCTCAACCAAGTCTGGTATTAATATGACGGCTGTGGCAGATATGG
GACGAATTATCAAGGAAACAGCAAATCTTTCAGATATGGGAGTGGCCAAGTTGGTTGTATTCGCTAATGCTGTTGAGGACAA
TCCATTTATGGCGGGTGCCTTTCATGGTGTTGGGGAAGCAGATGTTATCATCAATGTCGGAGTTTCTGGTCCTGGTGTTGTGA
AACGTGCTTTGGAAAAAGTTCGTGGACAGAGCTTTGATGTAGTAGCCGAAACAGTTAAGAAAACTGCCTTTAAAATCACTCG
TATCGGTCAATTGGTTGGTCAAATGGCCAGTGAGAGACTGGGTGTGGAGTTTGGTATTGTGGACTTGAGTTTGGCACCAACC
CCTGCGGTTGGAGACTCTGTGGCACGTGTCCTTGAGGAAATGGGGCTAGAAACAGTTGGCACGCATGGAACGACGGCTGCCT
TGGCCCTCTTGAACGACCAAGTTAAAAAGGGTGGAGTGATGGCCTGCAACCAAGTCGGTGGTTTATCTGGTGCCTTTATCCCT
GTTTCTGAGGATGAAGGAATGATTGCTGCAGTGCAAAATGGCTCTCTTAATTTAGAAAAACTAGAAGCTATGACGGCTATCT
GTTCTGTTGGATTGGATATGATTGCCATCCCAGAAGATACGCCTGCTGAAACTATTGCGGCTATGATTGCGGATGAAGCAGC
AATCGGTGTTATCAACATGAAAACAACAGCTGTTCGTATCATTCCCAAAGGAAAAGAAGGCGATATGATTGAGTTTGGTGGT
CTATTAGGAACTGCACCCGTTATGAAGGTTAATGGGGCTTCGTCTGTCGACTTCATCTCTCGCGGTGGACAAATCCCAGCACC
AATTCATAGTTTTAAAAATTAA

4128.1 (SEQ. ID. NO. 239)
ATGACACAGATTATTGATGGGAAAGCTTTAGCGGCCAAATTGCAGGGGCAGTTGGCTGAAAAGACTGCAAAATTAAAGGAA
GAAACAGGTCTAGTGCCTGGTTTGGTAGTGATTTTGGTTGGGGACAATCCAGCCAGCCAAGTCTACGTTCGCAACAAGGAGA
GGTCAGCCCTTGCGGCTGGTTTCCGTAGCGAAGTAGTACGGGTTCCAGAGACCATTACTCAAGAGGAATTGTTAGACCTGAT
TGCTAAATACAATCAGGATCCAGCTTGGCATGGGATTTTGGTTCAGTTGCCATTACCAAAACACATTGATGAAGAGGCGGTT
CTATTGGCTATTGACCCAGAAAAGGATGTGGATGGTTTCCATCCTCTAAACATGGGGCGTCTTTGGTCTGGTCATCCAGTCAT
GATTCCTTCGACACCGGCAGGAATTATGGAAATGTTCCATGAATATGGGATTGACTTGGAAGGTAAAAATGCAGTCGTCATC
GGTCGATCCAATATTGTCGGAAAACCTATGGCCCAGCTTCTTTTGGCAAAGAATGCAACAGTAACCTTGACTCACTCACGTAC
TCATAATCTTTCCAAGGTGGCTGCAAAAGCAGATATTCTGGTTGTTGCAATCGGTCGTGCCAAGTTTGTGACTGCTGACTTTG
TCAAACCAGGTGCGGTAGTCATTGACGTTGGGATGAACCGCGATGAAAATGGTAAGCTCTGTGGGGATGTTGATTATGAGGC
GGTTGCCCCACTTGCTAGCCACATTACGCCAGTCCCTGGAGGTGTCGGTCCTATGACCATTACTATGCTGATGGAGCAAACCT
ATCAGGCAGCACTTAGGACATTGGATAGAAAATAA

4128.2 (SEQ. ID. NO. 240)
ATGTCTAAATTTAATCGTATTCATTTGGTGGTACTGGATTCTGTAGGAATCGGTGCAGCACCAGATGCTAATAACTTTGTCAA
TGCAGGGGTTCCAGATGGAGCTTCTGACACACTGGGACACATTTCAAAAACAGTTGGTTTGAATGTCCCAAACATGGCTAAA
ATAGGTCTTGGAAATATTCCTCGTGAAACTCCTCTTAAGACTGTAGCAGCTGAAAGCAATCCAACTGGATATGCAACAAAAT
TAGAGGAAGTATCTCTTGGTAAGGATACTATGACTGGACACTGGGAAATCATGGGACTCAACATTACTGAGCCTTTCGATAC
TTTCTGGAACGGATTCCCAGAAGAAATCCTGACAAAAATCGAAGAATTCTCAGGACGCAAGGTTATTCGTGAAGCCAACAAA
CCTTATTCAGGAACGGCTGTTATCTATGATTTTGGACCACGTCAGATGGAAACTGGAGAGTTGATTATCTATACTTCAGCTGA
CCCTGTTTTGCAGATTGCTGCCCACGAAGACATTATTCCTTTGGATGAATTGTACCGTATCTGTGAATACGCTCGTTCGATTAC
CCTTGAGCGTCCTGCCCTTCTTGGTCGCATCATTGCTCGCCCTTATGTAGGTGAACCAGGTAACTTCACTCGTACGGCAAACC
GTCGTGACTTGGCTGTATCTCCATTTTTCCCAACTGTTTTGGATAAATTGAATGAGGCTGGTATCGATACTTATGCTGTGGGTA
AAATCAACGATATCTTTAACGGTGCTGGTATCAACCATGACATGGGTCACAACAAGTCAAATAGTCATGGAATTGATACACT
ATTGAAGACTATGGGACTTGCTGAGTTTGAAAAAGGATTCTCATTCACAAACCTAGTTGACTTTGATGCCCTTTACGGCCATC
GTCGTAATGCTCACGGTTACCGTGATTGCTTGCATGAGTTTGATGAACGCTTACCTGAAATTATCGCAGCTATGAGAGAGAAT
GACCTTCTCTTGATTACTGCGGACCATGGAAATGACCCAACGTATGCAGGAACGGATCACACTCGGGAATATATTCCATTGTT
GGCCTATAGCCCTGCCTTTAAAGGAAATGGTCTCATTCCAGTAGGACATTTTGCAGATATTTCAGCGACTGTTGCCGATAACT
TTGGTGTGGAAACTGCTATGATTGGGGAAAGTTTCTTAGATAAATTGGTATAA

4129.2 (SEQ. ID. NO. 241)
ATGTTTATTTCCATCAGTGCTGGAATTGTGACATTTTTACTAACTTTAGTAGAAATTCCGGCCTTTATCCAATTTTATAGAAAG
GCGCAAATTACAGGCCAGCAGATGCATGAGGATGTCAAACAGCATCAGGCAAAAGCTGGGACTCCTACAATGGGAGGTTTG
GTTTTCTTGATTACTTCTGTTTTGGTTGCTTTCTTTTTCGCCCTATTTAGTAGCCAATTCAGCAATAATGTGGGAATGATTTTGT
TCATCTTGGTCTTGTATGGCTTGGTCGGATTTTTAGATGACTTTCTCAAGGTCTTTCGTAAAATCAATGAGGGGCTTAATCCTA
AGCAAAAATTAGCTCTTCAGCTTCTAGGTGGAGTTATCTTCTATCTTTTCTATGAGCGCGGTGGCGATATCCTGTCTGTCTTTG
GTTATCCAGTTCATTTGGGATTTTTCTATATTTTCTTCGCTCTTTTCTGGCTAGTCGGTTTTTCAAACGCAGTAAACTTGACAGA
CGGTGTTGACGGTTTAGCTAGTATTTCCGTTGTGATTAGTTTGTCTGCCTATGGAGTTATTGCCTATGTGCAAGGTCAGATGG
ATATTCTTCTAGTGATTCTTGCCATGATTGGTGGTTTGCTCGGTTTCTTCATCTTTAACCATAAGCCTGCCAAGGTCTTTATGG
GTGATGTGGGAAGTTTGGCCCTAGGTGGGATGCTGGCAGCTATCTCTATGGCTCTCCACCAAGAATGGACTCTCTTGATTATC
GGAATTGTGTATGTTTTTGAAACAACTTCTGTTATGATGCAAGTCAGTTATTTCAAACTGACAGGTGGTAAACGTATTTTCCG
TATGACGCCTGTACATCACCATTTTGAGCTTGGGGGATTGTCTGGTAAAGGAAATCCTTGGAGCGAGTGGAAGGTTGACTTCT
TCTTTTGGGGAGTGGGACTTCTAGCAAGTCTCCTGACCCTAGCAATTTTATATTTGATGTAA

4133.1 (SEQ. ID. NO. 242)
TTGTTTAAGAAAAATAAAGACATTCTTAATATTGCATTGCCAGCTATGGGTGAAAACTTTTTGCAGATGCTAATGGGAATGGT
GGACAGTTATTTGGTTGCTCATTTAGGATTGATAGCTATTTCAGGGGTTTCAGTAGCTGGTAATATTATCACCATTTATCAGG
CGATTTTCATCGCTCTGGGAGCTGCTATTTCCAGTGTTATTTCAAAAAGCATAGGGCAGAAAGACCAGTCGAAGTTGGCCTAT
CATGTGACTGAGGCGTTGAAGATTACCTTACTATTAAGTTTCCTTTTAGGATTTTTGTCCATCTTCGCTGGGAAAGAGATGAT
AGGACTTTTGGGGACGGAGAGGGATGTAGCTGAGAGTGGTGGACTGTATCTATCTTTGGTAGGCGGATCGATTGTTCTCTTA
GGTTTAATGACTAGTCTAGGAGCCTTGATTCGTGCAACGCATAATCCACGTCTGCCTCTCTATGTTAGTTTTTTATCCAATGCC
TTGAATATTCTTTTTTCAAGTCTAGCTATTTTTGTTCTGGATATGGGGATAGCTGGTGTTGCTTGGGGGACAATTGTGTCTCGT
TTGGTTGGTCTTGTGATTTTGTGGTCACAATTAAAACTGCCTTATGGGAAGCCAACTTTTGGTTTAGATAAGGAACTGTTGAC
CTTGGCTTTACCAGCAGCTGGAGAGCGACTTATGATGAGGGCTGGAGATGTAGTGATCATTGCCTTGGTCGTTTCTTTTGGGA
CGGAGGCAGTTGCTGGGAATGCAATCGGAGAAGTCTTGACCCAGTTTAACTATATGCCTGCCTTTGGCGTCGCTACGGCAAC
GGTCATGCTGTTGGCCCGAGCAGTTGGAGAGGATGATTGGAAAAGAGTTGCTAGTTTGAGTAAACAAACCTTTTGGCTTTCT
CTGTTCCTCATGTTGCCCCTGTCCTTTAGTATATATGTCTTGGGTGTACCATTAACTCATCTCTATACGACTGATTCTCTAGCG
GTGGAGGCTAGTGTTCTAGTGACACTGTTTTCACTACTTGGGACCCCTATGACGACAGGAACAGTCATCTATACGGCAGTCTG
GCAGGGATTAGGAAATGCACGCCTCCCTTTTTATGCGACAAGTATAGGAATGTGGTGTATCCGCATTGGGACAGGATATCTG
ATGGGGATTGTGCTTGGTTGGGGCTTGCCTGGTATTTGGGCAGGGTCTCTCTTGGATAATGGTTTTCGCTGGTTATTTCTACGC
TATCGTTACCAGCGCTATATGAGCTTGAAAGGATAG

4135.2 (SEQ. ID. NO. 243)
ATGCAAACTCAAGAAAAACACTCGCAAGCAGCCGTTCTTGGCTTGCAGCACTTACTAGCCATGTACTCAGGATCTATCCTGG
TTCCCATCATGATTGCGACAGCCCTTGGCTATTCAGCTGAGCAGTTGACCTACCTGATTTCTACAGATATCTTCATGTGTGGG
GTGGCAACCTTCCTCCAACTCCAACTCAACAAATACTTTGGGATTGGACTCCCAGTCGTTCTTGGAGTTGCATTCCAGTCGGT
CGCTCCCTTGATTATGATTGGGCAAAGCCATGGTAGTGGCGCTATGTTTGGTGCCCTTATCGCATCTGGGATTTACGTGGTTC
TTGTTTCAGGCATCTTCTCAAAAGTAGCCAATCTCTTCCCATCTATCGTAACAGGATCTGTTATTACCACGATTGGTTTAACCT
TGATCCCTGTCGCTATTGGAAATATGGGAAATAACGTTCCAGAGCCAACTGGTCAAAGTCTCTTGCTTGCAGCTATTACTGTT
CTGATTATCCTCTTGATCAACATCTTTACCAAAGGATTTATCAAGTCTATCTCTATTTTGATTGGTCTGGTTGTTGGAACTGCC
ATTGCTGCTACTATGGGCTTGGTGGACTTCTCTCCTGTTGCGGTAGCTCCACTTGTCCATGTCCCAACTCCACTCTACTTTGGG
ATGCCAACCTTTGAAATCTCATCTATTGTCATGATGTGTATCATCGCAACGGTGTCTATGGTTGAGTCAACTGGTGTTTATCTG
GCCTTGTCTGATATCACAAAGGATCCAATCGACAGCACGCGCCTTCGCAACGGATACCGCGCAGAAGGTTTGGCCGTACTTC
TCGGAGGAATCTTTAACACCTTCCCTTACACCGGATTTTCACAAAACGTTGGTTTGGTTAAATTGTCAGGCATCAAAAAACGC
CTGCCAATCTACTACGCAGCTGGTTTCCTGGTTCTCCTTGGACTGCTTCCTAAGTTTGGCGCCCTTGCCCAAATCATTCCAAGC
TCCGTCCTCGGTGGTGCCATGCTGGTAATGTTTGGTTTTGTATCAATTCAAGGGATGCAAATCCTCGCCCGTGTTGACTTTGCT
AACAATGAACACAACTTCCTTATCGCAGCTGTTTCAATCGCTGCAGGTGTCGGTCTCAACAACAGTAATCTCTTTGTCAGCAT
GCCGACAGCCTTCCAAATGTTCTTCTCAAACGGAATCGTCGTAGCCAGCCTACTCGCTATTGTCCTCAATGCCGTATTAAATC
ATAAAAAGAAATAA

4136.2 (SEQ. ID. NO. 244)
ATGAAAGATAGAATAAAAGAATATTTACAAGACAAGGGAAAGGTGACTGTTAATGATTTGGCTCAGGCTTTGGGAAAAGAC
AGTTCCAAGGATTTTCGTGAGTTGATTAAAACCTTGTCCTTAATGGAAAGAAAGCACCAAATTCGTTTTGAAGAAGATGGTA
GTCTGACATTAGAAATTAAGAAAAAACATGAGATTACCCTCAAGGGGATTTTTCATGCCCATAAAAATGGCTTTGGCTTTGTT
AGTCTGGAAGGCGAGGAGGACGACCTTTTTGTAGGGAAAAATGATGTCAACTATGCTATTGATGGTGATACCGTCGAGGTAG
TGATTAAGAAAGTCGCTGACCGCAATAAGGGAACAGCAGCAGAAGCCAAAATTATTGATATCCTAGAACACAGTTTGACAA
CAGTTGTCGGGCAAATCGTTCTGGATCAGGAAAAACCTAAGTATGCTGGCTATATTCGTTCAAAAAATCAGAAAATCAGTCA
ACCGATTTATGTTAAGAAACCAGCCCTAAAATTAGAAGGAACAGAAGTTCTCAAAGTCTTTATCGATAAATACCCAAGCAAG
AAACATGATTTCTTTGTCGCGAGTGTTCTCGATGTAGTGGGACACTCAACGGATGTCGGAATTGATGTTCTTGAGGTCTTGGA
ATCAATGGACATTGTATCCGAGTTTCCAGAAGCTGTTGTTAAGGAAGCAGAAAGTGTGCCTGATGCTCCGTCTCAAAAGGAT
ATGGAAGGTCGTCTGGATCTAAGAGATGAAATTACCTTTACCATTGACGGTGCGGATGCCAAGGACTTGGACGATGCAGTGC
ATATCAAGGCTCTGAAAAATGGCAATCTGGAGTTTGGGGTTCACATCGCAGATGTTTCTTATTATGTGACCGAGGGGTCTGCC
CTTGACAAGGAAGCCCTTAACCGTGCGACTTCTGTTTACGTGACAGACCGAGTGGTGCCAATGCTTCCAGAACGACTATCAA
ATGGCATCTGCTCTCTCAATCCCCAAGTTGACCGCCTGACCCAGTCTGCTATTAT
GGAGATTGATAAACATGGTCGTGTGGTCAACTATACCATTACACAAACAGTTATCAAGACCAGTTTTCGTATGACCTATAGC
GATGTCAATGATATCCTAGCTGGCGATGAAGAAAAGAGAAAAGAATATCATAAAATTGTATCAAGTATCGAACTCATGGCC
AAGCTTCATGAAACTTTAGAAAACATGCGTGTGAAACGTGGAGCTCTCAATTTTGATACCAATGAAGCGAAGATTTTAGTGG
ATAAACAAGGTAAGCCTGTTGATATCGTTCTTCGGCAGCGTGGTATTGCCGAGCGGATGATTGAGTCTTTTATGTTGATGGCT
AATGAAACAGTTGCCGAACATTTCAGCAAGTTGGATTTGCCTTTTATCTATCGAATTCACGAGGAGCCTAAGGCTGAAAAGG
TTCAGAAGTTTATTGATTATGCTTCGAGTTTTGGCTTGCGCATTTATGGAACTGCCAGTGAGATTAGTCAGGAGGCACTTCAA
GACATCATGCGTGCTGTTGAGGGAGAACCTTATGCAGATGTATTGTCCATGATGCTTCTTCGCTCTATGCAGCAGGCTCGTTA
TTCGGAGCACAATCACGGCCACTATGGACTAGCTGCTGACTATTATACTCACTTTACCAGTCCAATTCGTCGTTATCCAGACC
TTCTTGTTCACCGTATGATTCGGGATTACGGCCGTTCTAAGGAAATAGCAGAGCATTTTGAACAAGTGATTCCAGAGATTGCG
ACCCAGTCTTCCAACCGTGAACGTCGTGCCATAGAAGCTGAGCGTGAAGTCGAAGCCATGAAAAAGGCTGAGTATATGGAA
GAATACGTGGGTGAAGAGTATGATGCAGTTGTATCAAGTATTGTCAAATTCGGTCTCTTTGTCGAATTGCCAAACACAGTTGA
AGGCTTGATTCACATCACTAATCTGCCTGAATTTTATCATTTCAATGAGCGTGATTTGACTCTTCGTGGAGAAAAATCAGGTA
TCACTTTCCGAGTGGGTCAGCAGATCCGTATCCGTGTTGAAAGAGCGGATAAAATGACTGGAGAGATTGATTTTTCATTCGTA
CCTAGTGAGTTTGATGTGATTGAAAAAGGCTTGAAACAGTCTAGTCGT
AGTGGCAGAGGGCGTGATTCAAATCGTCGTTCGGATAAGAAGGAAGACAAGAGAAAATCAGGACGCTCAAATGATAAGCGT
AAGCATTCACAAAAAGACAAGAAGAAAAAAGGAAAGAAACCTTTTTACAAGGAAGTAGCTAAGAAAGGAGCCAAGCATGG
CAAAGGGCGAGGGAAAGGTCGTCGCACAAAATAA

4137.2 (SEQ. ID. NO. 245)
ATGGGCACAACAGGATTTACAATAATTGACTTAATTATCTTGATTGTTTATTTACTTGCGGTGTTGGTTGCAGGTATCTATTTC
TCTAAAAAAGAGATGAAAGGAAAAGAGTTCTTTAAAGGAGATGGTTCGGTTCCTTGGTATGTTACTTCGGTATCCATTTTTGC
CACAATGCTCAGTCCGATTTCCTTCTTGGGACTCGCTGGTAGCTCTTATGCAGGTAGCTGGATTTTATGGTTTGCTCAATTAGG
GATGGTAGTAGCTATTCCACTGACAATTCGTTTTATCTTACCTATCTTTGCACGGATAGACATCGATACGGCATATGATTACTT
GGATAAACGTTTTAATTCTAAAGCACTTCGTATTATTTCAGCACTCTTGTTTATTATTTATCAATTGGGACGTATGTCTATCAT
TATGTACCTCCCATCAGCTGGTTTATCAGTATTGACAGGAATTGACATCAATATTTTGATTATTTTGATGGGTGTAGTTGCAAT
TGTTTATTCTTATACTGGTGGTCTAAAATCCGTATTATGGACAGACTTTATTCAAGGTGTGATTCTGATTAGTGGTGTCGTTTT
AGCTTTATTTGTACTGATTGCTAATATTAAAGGTGGCTTTGGTGCAGTAGCAGAAACATTAGCAAACGGGAAATTCCTTGCTG
CAAATGAAAAACTTTTCGATCCTAACTTGCTTTCAAACTCCATCTTTTTAATTGTGATGGGTTCAGGCTTTACAATCTTGTCTT
CCTATGCTTCATCTCAAGATTTGGTTCAACGTTTTACTACAACACAAAATATTAAGAAACTTAATAAGATGTTGTTCACAAAC
GGTGTTTTGTCACTTGCAACTGCAACAGTCTTTTACTTGATTGGTACAGGCTTGTACGTATTCTATCAAGTACAAAATGCAGA
TAGTGCAGCTAGCAATATCCCTCAAGACCAAATCTTTATGTACTTTATTGCATACCAGTTACCAGTAGGTATCACAGGTTTGA
TCTTGGCAGCGATTTATGCAGCATCTCAATCAACTATTTCAACAGGTTTGAACTCTGTTGCAACTTCATGGACATTGGATATT
CAAGATGTCATTTCTAAAAATATGTCAGACAATCGTCGTACGAAAATTGCACAATTCGTATCTCTAGCAGTAGGTTTATTCTC
AATTGGTGTTTCCATTGTCATGGCTCACTCAGATATTAAATCTGCATACGAATGGTTCAATAGTTTCATGGGACTTGTACTTG
GTCTACTTGGTGGTGTATTTATTCTTGGATTTGTTTCTAAAAAAGCAAATAAACAAGGTGCTTATGCAGCGCTGATTGTATCA
ACCATCGTCATGGTATTTATTAAATACTTCCTTCCTCCAACAGCTGTTAGCTACTGGGCATATTCATTGATTTCAATCTCTGTA
TCAGTAGTTTCAGGTTATATTGTATCTGTTCTTACTGGAAATAAAGTATCTGCACCTAAATATACAACGATTCATGATATTAC
AGAAATTAAAGCGGATTCAAGTTGGGAAGTTCGTCACTAA

4138.1 (SEQ. ID. NO. 246)
ATGAAATTTAGTAAAAAATATATAGCAGCTGGATCAGCTGTTATCGTATCCTTGAGTCTATGTGCCTATGCACTAAACCAGCA
TCGTTCGCAGGAAAATAAGGACAATAATCGTGTCTCTTATGTGGATGGCAGCCAGTCAAGTCAGAAAAGTGAAAACTTGACA
CCAGACCAGGTTAGCCAGAAAGAAGGAATTCAGGCTGAGCAAATTGTAATCAAAATTACAGATCAGGGCTATGTAACGTCA

CACGGTGACCACTATCATTACTATAATGGGAAAGTTCCTTATGATGCCCTCTTTAGTGAAGAACTCTTGATGAAGGATCCAAA
CTATCAACTTAAAGACGCTGATATTGTCAATGAAGTCAAGGGTGGTTATATCATCAAGGTCGATGGAAAATATTATGTCTAC
CTGAAAGATGCAGCTCATGCTGATAATGTTCGAACTAAAGATGAAATCAATCGTCAAAAACAAGAACATGTCAAAGATAAT
GAGAAGGTTAACTCTAATGTTGCTGTAGCAAGGTCTCAGGGACGATATACGACAAATGATGGTTATGTCTTTAATCCAGCTG
ATATTATCGAAGATACGGGTAATGCTTATATCGTTCCTCATGGAGGTCACTATCACTACATTCCCAAAAGCGATTTATCTGCT
AGTGAATTAGCAGCAGCTAAAGCACATCTGGCTGGAAAAAATATGCAACCGAGTCAGTTAAGCTATTCTTCAACAGCTAGTG
ACAATAACACGCAATCTGTAGCAAAAGGATCAACTAGCAAGCCAGCAAATAAATCTGAAAATCTCCAGAGTCTTTTGAAGG
AACTCTATGATTCACCTAGCGCCCAACGTTACAGTGAATCAGATGGCCTGGTCTTTGACCCTGCTAAGATTATCAGTCGTACA
CCAAATGGAGTTGCGATTCCGCATGGCGACCATTACCACTTTATTCCTTACAGCAAGCTTTCTGCCTTAGAAGAAAAGATTGC
CAGAATGGTGCCTATCAGTGGAACTGGTTCTACAGTTTCTACAAATGCAAAACCTAATGAAGTAGTGTCTAGTCTAGGCAGT
CTTTCAAGCAATCCTTCTTCTTTAACGACAAGTAAGGAGCTCTCTTCAGCATCTGATGGTTATATTTTTAATCCAAAAGATATC
GTTGAAGAAACGGCTACAGCTTATATTGTAAGACATGGTGATCATTTCCATTACATTCCAAAATCAAATCAAATTGGGCAAC
CGACTCTTCCAAACAATAGTCTAGCAACACCTTCTCCATCTCTTCCAATCAATCCAGGAACTTCACATGAGAAACATGAAGA
AGATGGATACGGATTTGATGCTAATCGTATTATCGCTGAAGATGAATCAGGTTTTGTCATGAGTCACGGAGACCACAATCAT
TATTTCTTCAAGAAGGACTTGACAGAAGAGCAAATTAAGGTGCGCAAAAACATTTAG

4139.1 (SEQ. ID. NO. 247)
ATGAAAAAAAGAGCAATAGTGGCAGTCATTGTACTGCTTTTGATTGGGCTGGATCAGTTGGTCAAATCCTATATCGTCCAGC
AGATTCCACTGGGTGAAGTGCGCTCCTGGATCCCCAATTTCGTTAGCTTGACCTACCTGCAAAATCGAGGTGCAGCCTTTTCT
ATCTTACAAGATCAGCAGCTGTTATTCGCTGTCATTACTCTGGTTGTCGTGATAGGTGCCATTTGGTATTTACATAAACACAT
GGAGGACTCATTCTGGATGGTCTTGGGTTTGACTCTAATAATCGCGGGTGGTCTTGGAAACTTTATTGACAGGGTCAGTCAGG
GCTTTGTTGTGGATATGTTCCACCTTGACTTTATCAACTTTGCAATTTTCAATGTGGCAGATAGCTATCTGACGGTTGGAGTGA
TTATTTTATTGATTGCAATGCTAAAAGAGGAAATAAATGGAAATTAA

4139.5 (SEQ. ID. NO. 248)
ATGAATACAAATCTTGCAAGTTTTATCGTTGGACTGATCATCGATGAAAACGACCGTTTTTACTTTGTGCAAAAGGATGGTCA
AACCTATGCTCTTGCTAAGGAAGAAGGCCAACATACAGTAGGGGATACGGTCAAAGGTTTTGCATACACGGATATGAAGCA
AAAACTCCGCCTGACAACCTTAGAAGTGACTGCCACTCAGGACCAATTTGGTTGGGGACGTGTCACAGAGGTTCGTAAGGAC
TTGGGTGTCTTTGTGGATACAGGCCTTCCTGACAAGGAAATCGTTGTGTCACTCGATATTCTCCCTGAGCTCAAGGAACTCTG
GCCTAAGAAGGGCGACCAACTCTACATCCGTCTTGAAGTGGATAAGAAAGACCGTATCTGGGGCCTCTTGGCTTATCAAGAA
GACTTCCAACGTCTTGCTCGTCCTGCCTACAACAACATGCAGAACCAAAACTGGCCAGCCATTGTTTACCGTCTCAAGCTGTC
AGGAACTTTTGTTTACCTACCAGAAAATAATATGCTTGGTTTTATTCATCCTAGCGAGCGTTACGCAGAGCCACGTTTGGGGC
AAGTATTAGATGCGCGCGTTATTGGTTTCCGTGAAGTGGACCGCACTCTGAACCTCTCCCTCAAACCACGCTCCTTTGAAATG
TTGGAAAACGATGCTCAGATGATTTTGACTTATTTGGAAAGCAATGGCGGTTTCATGACCTTAAATGACAAGTCATCTCCAGA
CGACATCAAGGCAACCTTTGGCATTTCTAAAGGTCAGTTCAAGAAAGCTTTAGGTGGTCTTATGAAGGCTGGTAAAATCAAG
CAGGACCAGTTTGGGACAGAGTTGATTTAG

4139.8 (SEQ. ID. NO. 249)
ATGAAAGATGTTAGTCTATTTTTATTGAAAAAAGTTTTCAAAAGCCGCTTAAACTGGATTGTCTTAGCTTTATTTGTATCTGTA
CTCGGTGTTACCTTTTATTTAAATAGTCAGACTGCAAACTCACACAGCTTGGAGAGCAGGTTGGAAAGTCGCATTGCAGCCA
ACGAGAGGGCTATCAATGAAAATGAAGAGAAACTCTCCCAAATGTCTGATACCAGCTCGGAGGAATACCAGTTTGCTAAAA
ATAATTTAGACGTGCAAAAAAATCTTTTGACGCGAAAGACAGAAATTCTGACTTTATTAAAAGAAGGGCGCTGGAAAGAAG
CCTACTATTTGCAGTGGCAAGATGAAGAGAAGAATTATGAATTTGTATCAAATGACCCGACTGCTAGCCCTGGCTTAAAAAT
GGGGGTTGACCGCGAACGGAAGATTTACCAAGCCCTGTATCCCTTGAACATAAAAGCACATACTTTGGAGTTTCCGACCCAC
GGGATTGATCAGATTGTCTGGATTTTAGAGGTTATCATCCCAAGTTTGTTTGTGGTTGCTATTATTTTTATGCTAACACAACTA
TTTGCAGAAAGATATCAAAATCATCTGGACACAGCTCACTTATATCCTGTTTCAAAAGTGACATTTGCAATATCCTCTCTTGG
AGTTGGAGTGGGATATGTAACTGTGCTGTTTATCGGAATCTGTGGCTTTTCTTTTCTAGTGGGAAGTCTGATAAGTGGTTTTG
GACAGTTAGATTATCCCTACCCAATTTATAGCTTAGTGAATCAAGAAGTAACTATTGGGAAAATACAAGATGTATTATTTCCT
GGCTTGCTCTTAGCTTTCTTAGCCTTTATCGTCATTGTGGAAGTTGTGTACTTGATTGCTTACTTTTTCAAGCAAAAAATGCCT
GTCCTCTTTCTTTCACTCATTGGGATTGTTGGCTTATTGTTTGGTATCCAAACCATTCAGCCTCTTCAAAGGATTGCACATCTG
ATTCCCTTTACTTACTTGCGTTCAGTGGAGATTTTATCTGGAAGATTACCTAAGCAGATTGATAATGTCGATCTAAATTGGAG
CATGGGAATGGTCTTACTTCCTTGCCTGATTATCTTTTTGCTATTGGGAATTCTATTTATTGAAAGATGGGGAAGTTCACAGA
AAAAAGAATTTTTTTAATAGATTCTAG

4141.1 (SEQ. ID. NO. 250)
ATGATGAAGTTCATATTGGATATTGTTAGTACACCAGCTATTTTAGTAGCTTTAATTGCAATCTTAGGATTAGTTCTTCAGAA
GAAGAAATTACCTGATATTATTAAAGGTGGAATTAAGACCTTTGTTGGTTTCTTAGTTGTATCTGGTGGTGCAGGAATTGTAC
AAAATTCTTTAAATCCATTTGGTACCATGTTTGAGCATGCTTTTCATTTATCTGGCGTTGTGCCGAATAATGAAGCAATTGTAG
CTGTAGCTTTAACAACATATGGCTCAGCTACTGCAATGATTATGTTTGCAGGCATGGTGTTCAATATCTTAATCGCTCGTTTTA
CTCGATTTAAATATATTTTTTTAACAGGGCACCACACTCTATATATGGCATGTATGATTGCGGTCATTTTATCAGTTGCTGGCT
TTACTAGCTTGCCTCTCATCTTACTAGGAGGATTAGCACTCGGTATTATTATGAGTATTTCCCCAGCATTTGTGCAAAAATATA
TGGTTCAATTAACTGGAAATGACAAGGTAGCTTTAGGTCATTTCAGTTCTTTGGGATATTGGTTGAGTGGTTTTACTGGTAGC
CTTATCGGTGACAAATCAAAATCAACAGAGGACATTAAATTTCCAAAGAGTTTAGCTTTTTTACGTGATAGTACTGTTAGTAT
TACTTTATCCATGGCAGTTATTTACATTATTGTAGCTATCTTTGCAGGGTCAGAATATATAGAAAAAGAAATCAGTAGTGGTA
CAAGTGGTCTAGTTTATGCTTTACAATTAGCAGGTCAATTTGCAGCAGGGGTATTTGTTATTTTAGCAGGTGTTCGCCTTATTT
TGGGCGAAATTGTTCCAGCCTTTAAAGGTATTTCAGAGCGTCTTGTACCTAATTCAAAACCTGCTTTGGATTGTCCGATTGTTT
ATACTTATGCACCCAATGCAGTTCTAATTGGATTTATCTCTAGTTTTGTTGGTGGTTTAGTAAGTATGGTAATTATGATTGCTT
CAGGAACGGTTGTTATCTTACCAGGTGTTGTGCCTCATTTCTTCTGTGGAGCGACTGCAGGTGTCATTGGGAATGCATCTGGT
GGTGTTCGTGGAGCCACTATTGGAGCATTTTTACAAGGTATTTTAATCAGTTTTCTTCCAGTCTTTTTAATGCCAGTTTTGGGA
GGACTTGGTTTCCAAGGATCAACTTTCTCAGATGCAGATTTTGGTCTATCAGGAATTATTTTAGGAATGTTAAATCAATTTGG
CTCACAAGCAGGCATTGTGATTGGTCTTGTTCTTATTCTAGCAGTTATGTTTGGAGTATCCTTTATTAAAAAGCCATCTGCAAC
GGAGGAATAA

4142.3 (SEQ. ID. NO. 251)

ATGATTAAAACATTTCTCTCTGCCCTTTCGGTCATTCTCTTTTCTATCCCTATCATAACTTATTCTTTTTTCCCATCTTCTAATCT
TAACATTTGGCTATCTACCCAACCTATCTTGGCACAGATTTATGCCTTCCCCTTAGCTACTGCAACTATGGCTGCTATTTTAAG
TTTCTTATTTTTTTTCCTATCTTTTTACAAGAAAAATAAACAAATACGGTTTTACTCTGGCATTTTGCTCTTACTATCGCTCATA
TTACTATTATTCGGAACAGATAAAACCCTTTCTTCTGCATCAAATAAGACTAAAACCTTAAAATTAGTAACTTGGAACGTCGC
TAATCAAATAGAAGCACAACATATTGAGCGAATTTTTAGCCATTTTGACGCCGATATGGCTATATTCCCTGAACTAGCTACCA
ATATCAGAGGTGAGCAAGAAAACCAGAGAATCAAACTATTGTTTCATCAAGTTGGACTTTCTATGGCCAACTATGATATTTTC
ACTTCTCCACCTACCAATAGTGGAATAGCTCCTGTGACTGTGATTGTCAAGAAAAGTTATGGTTTCTATACAGAAGCTAAAAC
TTTTCATACAACACGGTTCGGGACAATTGTATTACATTCGAGAAAACAAAATATACCAGATATCATTGCCTTGCATACTGCGC
CTCCTCTGCCAGGTTTAATGGAAATCTGGAAGCAAGACTTAAACATCATTCATAATCAATTGGCTTCAAAATATCCAAAGGCT
ATTATTGCAGGTGATTTTAATGCAACTATGCGTCATGGAGCACTTGCAAAAATAAGCTCTCATAGGGACGCATTAAATGCAC
TGCCACCTTTTGAAAGAGGAACTTGGAATAGCCAAAGTCCAAAACTTTTTAATGCAACAATAGATCATATTTTATTGCCTAAA
AACCACTACTATGTTAAAGATTTAGACATTGTAAGTTTTCAAAACTCTGATCATAGATGTATTTTTACAGAAATCACATTTTA
A

4142.4 (SEQ. ID. NO. 252)
ATGAATCCAATCCAAAGATCTTGGGCTTATGTCAGCAGAAAGCGACTGAGAAGTTTTATTTTATTTCTGATTTTATTGGTCTT
ATTGGCCGGAATTTCAGCCTGTTTGACTCTGATGAAGTCCAACAAAACAGTAGAAAGCAATCTTTATAAATCACTCAATACA
TCTTTTTCTATTAAGAAGATAGAGAATGGTCAGACATTCAAGTTGTCAGACCTAGCATCTGTAAGCAAGATTAAGGGGCTGG
AAAATGTCTCTCCTGAACTTGAGACGGTCGCAAAACTAAAAGACAAGGAAGCAGTGACTGGCGAGCAGAGCGTGGAGCGTG
ATGATTTATCAGCTGCAGACAATAACTTGGTTAGCTTAACGGCTCTTGAGGATTCATCCAAGGATGTAACCTTTACCAGTTCG
GCTTTCAATCTAAAAGAAGGGCGACACCTTCAAAAAGGGGATTCCAAGAAAATCCTTATCCACGAAGAATTGGCTAAGAAG
AACGGTCTTTCGCTTCATGACAAGATTGGCTTGGATGCTGGTCAGTCTGAATCTGGAAAAGGACAAACAGTAGAGTTTGAGA
TTATCGGCATCTTTTCTGGTAAAAAACAAGAGAAATTCACAGGCTTGTCTTCTGACTTCAGTGAAAATCAAGTCTTTACAGAC
TATGAAAGTAGCCAAACCCTTTTGGGCAATAGTGAAGCTCAAGTCAGTGCAGCACGCTTCTATGTAGAAAATCCTAAGGAAA
TGGACGGACTCATGAAGCAGGTAGAAAACTTGGCCTTGGAAAATCAAGGCTACCAAGTCGAAAAGGAAAACAAGGCTTTTG
AACAAATCAAAGACTCAGTTGCAACTTTCCAAACCTTCCTGACCATCTTCCTTTATGGGATGTTGATAGCAGGAGCTGGAGCC
TTAATTCTGGTTTTGTCTCTCTGGTTGAGAGAACGGGTCTATGAAGTGGGGATTTTACTTGCACTTGGAAAAGGCAAGAGCTC
GATCTTCCTACAATTCTGTTTAGAGGTAGTTTTGGTATCTCTTGGAGCTTTGCTTCCAGCATTTGTTGCAGGAAACGCAATCAC
AACTTACCTACTCCAAACTCTACTAGCAAGTGGAGATCAGGCAAGCTTACAAGATACACTAGCCAAAGCAAGCAGTTTATCA
ACTAGCATCTTATCTTTTGCAGAATCCTATGTTTTTCTAGTTCTGCTTAGTTGCTTATCTGTAGCCCTTTGTTTCCTATTCTTATT
TAGAAAATCACCGAAAGAAATTTTATCATCTATTAGTTAA

4142.5 (SEQ. ID. NO. 253)
ATGTTACACAACGCATTTGCCTATGTTACAAGGAAGTTTTTCAAATCGATTGTCATCTTCCTGATTATTCTCCTCATGGCGAGC
TTGAGTTTGGTCGGCTTGTCAATCAAGGGAGCTACTGCCAAGGCTTCTCAGGAGACCTTTAAAAATATCACCAATAGCTTCTC
CATGCAAATCAATCGTCGCGTCAACCAAGGAACGCCTCGTGGTGCTGGGAATATCAAGGGTGAAGACATCAAAAAAATCAC
CGAAAACAAGGCCATTGAGTCTTATGTCAAACGTATCAACGCTATCGGAGATTTGACTGGATATGACCTGATTGAAACGCCA
GAAACCAAGAAGAATCTCACTGCTGATCGTGCCAAGCGTTTTGGAAGTAGCTTGATGATTACAGGTGTCAATGACTCCTCTA
AAGAAGACAAGTTTGTCTCTGGTTCTTATAAACTAGTCGAAGGAGAGCACTTAACCAACGACGACAAGGATAAAATCCTCTT
GCACAAGGACTTGGCAGCCAAACACGGCTGGAAAGTAGGGGACAAGGTTAAACTGGACTCTAATATCTACGATGCAGATAA
TGAAAAAGGAGCCAAGGAAACAGTTGAAGTGACAATCAAGGGACTCTTTGATGGTCATAATAAGTCAGCAGTAACCTACTC
ACAAGAACTTTACGAAAACACAGCTATTACAGACATTCACACTGCTGCAAAACTTTATGGATACACAGAAGACACAGCCATT
TATGGGGACGCAACCTTCTTTGTAACAGCAGACAAGAACTTGGATGATGTTATGAAAGAGTTGAATGGCATCAGTGGTATCA
ACTGGAAGAGCTACACACTCGTCAAGAGCTCCTCTAACTACCCAGCTCTTGAGCAATCTATCTCTGGTATGTACAAGATGGCC
AACCTCCTCTTCTGGGGTAGCTTGAGCTTCTCAGTTCTCCTCCTTGCCCTCTTGCTCAGCCTTTGGATCAACGCCCGTCGCAAG
GAAGTGGGAATTCTCCTCTCTATCGGCCTCAAGCAGGCAAGTATCTTGGGTCA
ATTCATCACCGAATCTATCTTGATTGCTATCCCTGCTCTAGTTTCTGCTTACTTCCTAGCTAATTACACTGCCCGTGCAATTGG
AAACACTGTCCTTGCCAATGTGACTTCAGGTGTTGCCAAACAGGCTAGTAAGGCGGCTCAAGCCTCTAACCTTGGTGGTGGT
GCAGAAGTAGATGGCTTTAGCAAGACCTTGTCGAGCCTAGACATTTCCATTCAGACATCAGACTTTATCATCATTTTTGTCCT
TGCCTTGGTTCTAGTGGTTCTCGTTATGGCGCTTGCTTCAAGCAATCTCCTTAGAAAACAACCAAAAGAGCTCTTGCTGGATG
GTGAATAA

4144.1 (SEQ. ID. NO. 254)
ATGTCACAGGATAAACAAATGAAAGCTGTTTCTCCCCTTCTGCAGCGAGTTATCAATATCTCATCGATTGTCGGTGGGGTTGG
GAGTTTGATTTTCTGTATTTGGGCTTATCAGGCTGGGATTTTACAATCCAAGGAAACCCTCTCTGCCTTTATCCAGCAGGCAG
GCATCTGGGGTCCACCTCTCTTTATCTTTTTACAGATTTTACAGACTGTCGTCCCTATCATTCCAGGGGCCTTGACCTCGGTGG
CTGGGGTCTTTATCTACGGGCACATCATCGGGACTATCTACAACTATATCGGCATCGTGATTGGCTGTGCCATTATCTTTTATC
TAGTGCGCCTATACGGAGCTGCCTTTGTCCAGTCTGTCGTCAGCAAGCGCACCTACGACAAGTACATCGACTGGCTAGATAA
GGGCAATCGTTTTGACCGCTTCTTTATTTTTATGATGATTTGGCCCATTAGCCCAGCTGACTTTCTCTGTATGCTGGCTGCCCT
GACCAAGATGAGCTTCAAGCGCTACATGACCATCATCATTCTGACCAAACCCTTTACCCTCGTGGTTTATACCTACGGTCTGA
CCTATATTATTGACTTTTTCTGGCAAATGCTTTGA

4144.2 (SEQ. ID. NO. 255)
ATGAGAAATATGTGGGTTGTAATCAAGGAAACCTATCTTCGACATGTCGAGTCATGGAGTTTCTTCTTTATGGTGATTTCGCC
GTTCCTCTTTTTAGGAATCTCTGTAGGAATTGGGCATCTCCAAGGTTCTTCTATGGCTAAAAATAATAAAGTGGCAGTAGTGA
CAACAGTGCCATCTGTAGCAGAAGGACTGAAGAATGTAAATGGTGTTAACTTCGACTATAAAGACGAAGCAAGTGCCAAAG
AAGCAATTAAAGAAGAAAAATTAAAAGGTTATTTGACCATTGATCAAGAAGATAGTGTTCTAAAGGCAGTTTATCATGGCGA
AACATCGCTTGAAAATGGAATTAAATTTGAGGTTACAGGTACACTCAATGAACTGCAAAATCAGCTTAATCGTTCAACTGCT
TCCTTGTCTCAAGAGCAGGAAAAACGCTTAGCGCAGACAATTCAATTCACAGAAAAGATTGATGAAGCCAAGGAAAATAAA
AAGTTTATTCAAACAATTGCAGCAGGTGCCTTAGGATTCTTTCTTTATATGATTCTGATTACCTATGCGGGTGTAACAGCTCA
GGAAGTTGCCAGTGAAAAAGGCACCAAAATTATGGAAGTCGTTTTTTCTAGCATAAGGGCAAGTCACTATTTCTATGCGCGG
ATGATGGCTCTGTTTCTAGTGATTTTAACGCATATTGGGATCTATGTTGTAGGTGGTCTGGCTGCCGTTTTGCTCTTTAAAGAT
TTGCCATTCTTGGCTCAGTCTGGTATTTTGGATCACTTGGGAGATGCTATCTCACTGAATACCTTGCTCTTTATTTTGATCAGT
CTTTTCATGTACGTAGTCTTGGCAGCCTTCCTAGGATCTATGGTTTCTCGTCCTGAGGACTCAGGGAAAGCCTTGTCGCCTTTG
ATGATTTTGATTATGGGTGGTTTTTTTGGAGTGACAGCTCTAGGTGCAGCTGGTGACAATCTCCTCTTGAAGATTGGTTCTTAT

ATTCCCTTTATTTCGACCTTCTTTATGCCGTTTCGAACGATTAATGACTATGCGGGGGGAGCAGAAGCATGGATTTCACTTGC
TATTACAGTGATTTTTGCGGTGGTAGCAACAGGATTTATCGGACGCATGTATGCTAGTCTCGTTCTTCAAACGGATGATTTAG
GGATTTGGAAAACCTTTAAACGTGCCTTATCTTATAAATAG

4144.3 (SEQ. ID. NO. 256)
ATGACAGAAACCATTAAATTGATGAAGGCTCATACTTCAGTGCGCAGGTTTAAAGAGCAAGAAATTCCCCAAGTAGACTTAA
ATGAGATTTTGACAGCAGCCCAGATGGCATCATCTTGGAAGAATTTCCAATCCTACTCTGTGATTGTGGTACGAAGTCAAGA
GAAGAAAGATGCCTTGTATGAATTGGTACCTCAAGAAGCCATTCGCCAGTCTGCTGTTTTCCTTCTCTTTGTCGGAGATTTGA
ACCGAGCAGAAAAGGGAGCCCGACTTCATACCGACACCTTCCAACCCCAAGGTGTGGAAGGTCTCTTGATTAGTTCGGTCGA
TGCAGCTCTTGCTGGACAAAACGCCTTGTTGGCAGCTGAAAGCTTGGGCTATGGTGGTGTGATTATCGGTTTGGTTCGATACA
AGTCTGAAGAAGTGGCAGAGCTCTTTAACCTACCTGACTACACCTATTCTGTCTTTGGGATGGCACTGGGTGTGCCAAATCAA
CATCATGATATGAAACCGAGACTGCCACTAGAGAATGTTGTCTTTGAGGAAGAATACCAAGAACAGTCAACTGAGGCAATCC
AAGCTTATGACCGTGTTCAGGCTGACTATGCTGGGGCGCGTGCGACCACAAGCTGGAGTCAGCGCCTAGCAGAACAGTTTGG
TCAAGCTGAACCAAGCTCAACTAGAAAAAATCTTGAACAGAAGAAATTATTGTAG

4146.1 (SEQ. ID. NO. 257)
ATGTTAAAACTTATTGCTATTGTTGGAACAAATTCAAAACGTTCTACAAACCGTCAATTGCTTCAATACATGCAAAAACACTT
TACTGACAAAGCTGAAATTGAACTTGTTGAAATCAAGGCCATTCCTGTCTTCAACAAACCAGCTGACAAGCAAGTACCTGCT
GAAATATTGGAAATTGCTGCTAAAATCGAAGAGGCAGATGGCGTTATTATCGGTACTCCTGAGTATGATCACTCTATTCCAG
CTGTTTTGATGAGCGCTCTTGCTTGGTTGTCTTATGGTATTTACCCACTTTTGAACAAACCAATCATGATTACAGGTGCTTCTT
ACGGTACGCTTGGTTCATCTCGTGCCCAATTGCAACTTCGTCAAATCTTGAATGCTCCTGAAATCAAGGCAAATGTTCTTCCA
GATGAATTCTTGCTCTCACACTCTCTTCAAGCATTTAACCCAAGTGGCGACTTGGTTGACCTTGATGTTATCAAGAAATTGGA
TGCCATCTTTGATGACTTCCGTATCTTTGTAAAAATCACAGAAAAATTACGTAATGCACAAGAATTACTTCGCAAAGATGCTG
AAGACTTTGACTGGGAAAATTTGTAA

4146.2 (SEQ. ID. NO. 258)
ATGAATACCTATCAATTAAATAATGGAGTAGAAATTCCAGTATTGGGATTTGGAACTTTTAAGGCTAAGGATGGAGAAGAAG
CCTATCGTGCAGTGTTAGAAGCCTTGAAGGCTGGTTATCGTCATATTGATACGGCGGCGATTTATCAGAATGAAGAAAGTGT
TGGTCAAGCAATCAAAGATAGCGGAGTTCCACGTGAAGAAATGTTCGTAACTACCAAGCTTTGGAATAGTCAGCAAACCTAT
GAGCAAACTCGTCAAGCTTTGGAAAAATCTATAGAAAAACTGGGCTTGGATTATTTGGATTTGTATTTGATTCATTGGCCGAA
CCCAAAACCGCTCAGAGAAAATGACGCATGGAAAACTCGCAATGCGGAAGTTTGGAGAGCGATGGAAGACCTCTATCAAGA
AGGGAAAATCCGTGCTATCGGCGTTAGCAATTTTCTTCCCCATCATTTGGATGCCTTGCTTGAAACTGCAACTATCGTTCCTG
CGGTCAATCAAGTTCGCTTGGCGCCAGGTGTGTATCAAGATCAAGTCGTAGCTTACTGTCGTGAAAAGGGAATTTTATTGGA
AGCTTGGGGGCCTTTTGGACAAGGAGAACTGTTTGATAGCAAGCAAGTCCAAGAAATAGCAGCAAATCACGGAAAATCGGT
TGCTCAGATAGCCTTGGCCTGGAGCTTGGCAGAAGGATTTTTACCACTTCCAAAATCTGTCACAACCTCTCGTATTCAAGCTA
ATCTTGATTGCTTTGGAATTGAACTGAGTCATGAGGAGAGAGAAACCTTAAAAACGATTGCTGTTCAATCGGGTGCTCCACG
AGTTGATGATGTGGATTTCTAG

4147.1 (SEQ. ID. NO. 259)
ATGAGGTGCAAAATGCTTGATCCAATTGCTATTCAACTAGGACCCCTAGCCATTCGTTGGTATGCCTTATGTATTGTGACAGG
CTTGATTCTTGCGGTTTATTTGACCATGAAAGAAGCACCTAGAAAGAAGATCATACCAGACGATATTTTAGATTTTATCTTAG
TAGCCTTTCCCTTGGCTATTTTAGGAGCTCGTCTCTACTATGTTATTTTCCGATTTGATTACTATAGTCAGAATTTAGGAGAGA
TTTTTGCCATTTGGAATGGTGGTTTGGCCATTTACGGTGGTTTGATAACTGGGGCTCTTGTGCTCTATATCTTTGCTGACCGTA
AACTCATCAATACTTGGGATTTTCTAGATATTGCGGCGCCTAGCGTTATGATTGCTCAAAGTTTGGGGCGTTGGGGTAATTTC
TTTAACCAAGAAGCTTATGGTGCAACAGTGGATAATCTGGATTATCTACCTGGCTTTATCCGTGACCAGATGTATATTGAGGG
GAGCTACCGTCAACCGACTTTCCTTTATGAGTCTCTATGGAATCTGCTTGGCTTTGCCTTGATTCTGATTTTTAGACGGAAATG
GAAGAGTCTCAGACGAGGTCATATCACGGCCTTTTACTTGATTTGGTATGGTTTCGGTCGTATGGTTATCGAAGGTATGCGAA
CAGATAGTCTCATGTTCTTCGGCTTTCGAGTGTCCCAATGGCTGTCAGTTGTCCTTATCGGTCTCGGTATAATGATCGTTATTT
ATCAAAATCGAAAGAAGGCCCCTTACTATATTACAGAGGAGGAAAACTAA

4147.2 (SEQ. ID. NO. 260)
ATGGGTAAATTATCCTCAATCCTTTTAGGAACCGTTTCAGGTGCAGCTCTTGCCTTGTTTTTAACAAGTGATAAGGGCAAACA
AGTTTGCAGTCAGGCTCAAGATTTTCTAGATGATTTGAGAGAAGATCCGGAGTATGCCAAGGAGCAAGTCTGTGAAAAACTG
ACAGAAGTTAAGGAGCAGGCTACAGATTTTGTTCTGAAAACAAAAGAACAGGTTGAGTCAGGTGAAATCACTGTGGACAGT
ATACTTGCTCAAACTAAATCCTATGCTTTTCAAGCGACAGAAGCATCAAAAAATCAATTAAATAATCTCAAGGAGCAATGGC
AAGAAAAAGCCGAAGCTCTTGATGACTCAGAAGAGATTGTGATTGATATAACAGAAGAATAA

4147.3 (SEQ. ID. NO. 261)
ATGAAAACTAAATTGATCTTTTGGGGCTCTATGCTCTTTCTCCTCTCCCTCTCCATCCTTCTGACCATTTATCTGGCTTGGATTT
TCTATCCTATGGAGATTCAGTGGCTAAACTTAACGAATCGAGTCTATCTAAAACCAGAAACCATTCAATACAATTTTCATATC
TTGATGAATTATCTGACCAATCCTTTTAGTCAGGTCTTACAGATGCCTGATTTTCGTTCGTCAGCAGCTGGTCTGCACCATTTC
GCAGTGGTCAAGAATCTCTTTCATTTGGTTCAGCTAGTAGCTCTAGTGACACTGCCAAGTTTCTATGTCTTTGTCAATAGGATT
GTGAAAAAGGACTTTTTGTCTCTTTATCGAAAAAGTCTCCTGGCTCTAGTAGTCTTACCTGTGATGATTGGACTTGGGGGAGT
TTTGATTGGTTTTGACCAATTCTTTACTCTTTTCCATCAAATTCTCTTTGTGGGAGATGATACCTGGCTTTTTGATCCAGCCAA
GGATCCTGTTATTATGATTTTGCCAGAGACCTTCTTTCTTCATGCCTTCCTCCTCTTTTTTGCCCTCTATGAAAACTTCTTTGGC
TATCTGTATCTGAAAAGTCGTAGGAAGTGA

4149.1 (SEQ. ID. NO. 262)
ATGACTTATCATTTTACTGAAGAATACGATATTATTGTAATTGGTGCGGGACACGCTGGGGTTGAGGCTTCCTTGGCCGCTAG
CCGTATGGGCTGTAAGGTCCTGCTTGCGACCATCAATATTGAAATGCTGGCTTTCATGCCTTGTAATCCCTCTATCGGTGGTTC
TGCCAAGGGGATTGTCGTGCGTGAAGTCGATGCCCTCGGTGGCGAGATGGCCAAAACCATTGACAAGACTTACATCCAGATG
AAGATGCTAAACACAGGGAAGGGGCCAGCTGTCCGTGCCCTTCGTGCGCAGGCTGACAAGGAACTTTACTCTAAGGAGATG
CGCAAGACGGTTGAAAACCAAGAAAATCTGACCCTTCGTCAAACCATGATTGATGAGATTTTGGTGGAAGATGGCAAGGTTG
TCGGTGTGCGTACAGCCACCCATCAAGAATATGCTGCTAAGGCTGTTATTGTGACGACAGGGACTGCTCTCCGTGGGGAAAT
TATCATCGGAGACCTCAAGTACTCATCAGGTCCTAACCACAGCTTGGCTTCTATTAACCTAGCTGACAATCTCAAGGAACTGG

GTCTCGAAATCGGTCGTTTCAAGACAGGAACCCCTCCACGTGTCAAGGCTTCTTCTATCAATTACGATGTGACAGAAATTCAG
CCAGGAGACGAAGTGCCTAATCATTTCTCATACACTTCACGTGATGAGGATTATGTCAAGGACCAAGTACCATGCTGGTTGA
CCTATACCAATGGTACCAGTCATGAGATTATCCAAAACAACCTCCACCGTGCGCCTATGTTTACAGGTGTGGTCAAGGGAGT
GGGGCCTCGTTACTGTCCGTCGATTGAAGACAAGATTGTGCGCTTTGCGGACAAGGAACGTCACCAACTCTTCCTTGAGCCA
GAAGGGCGCAATACTGAGGAAGTCTATGTGCAAGGACTTTCAACCAGTCTGCCTGAGGATGTCCAGCGTGACTTGGTGCATT
CCATCAAAGGTTTGGAAAATGCAGAGATGATGCGGACAGGTTATGCTATTGA
GTATGATATGGTCTTGCCTCATCAGTTGCGTGCGACTTTGGAAACCAAGAAAATCTCAGGTCTCTTCACTGCTGGTCAGACAA
ATGGAACATCAGGTTACGAAGAGGCAGCAGGCCAAGGGATTATCGCGGGTATCAATGCGGCTCTGAAAATCCAAGGCAAGC
CTGAATTGATTTTGAAGCGCAGTGATGGTTATATCGGGGTGATGATCGACGACTTGGTGACCAAGGGAACCATTGAACCCTA
CCGTCTCTTGACCAGTCGTGCTGAATACCGTCTCATTCTTCGTCATGACAATGCTGATATGCGCTTGACTGAGATGGGACGCG
AGATTGGCCTTGTGGACGATGAACGCTGGGCTCGTTTTGAAATCAAGAAAAATCAATTTGATAATGAGATGAAGCGCCTAGA
CAGTATCAAACTCAAGCCAGTCAAGGAAACCAATGCCAAGGTTGAGGAGATGGGCTTCAAACCCTTGACCGATGCAGTGAC
AGCCAAGGAATTCCTTCGCCGTCCAGAAGTTTCTTACCAAGATGTGGTGGCCTTCATCGGACCAGCTGCAGAAGACTTGGAT
GACAAGATTATCGAATTGATTGAAACAGAAATCAAGTATGAAGGCTATATTTCCAAAGCCATGGACCAGGTTGCCAAGATGA
AACGCATGGAAGAAAAACGCATTCCGGCCAATATCGACTGGGATGACATTGATTCTATCGCAACCGAAGCCCGTCAGAAGTT
CAAACTCATCAATCCAGAAACCATCGGCCAAGCCAGCCGTATTTCGGGAGTAAACCCAGCAGATATTTCTATTTTGATGGTG
TATCTGGAAGGTAAAAATCGTAGTATTTCTAAAACTCTTCAAAAATCAAAATGA

4149.2 (SEQ. ID. NO. 263)
ATGAAAGTATTAGCTTTTGATACGTCCAGCAAGGCTCTTTCTCTGGCTATTTTAGAGGATAAGCAGGTTCTTGCCGAGACGAC
GATTAATATTAAGAAAAATCACAGTATTACTCTTATGCCTGCCATCGATTTTTTGATGGCAAGTTTGGATTGGACACCCAAGG
ATTTGGACCGAATCGTGGTAGCTGAAGGGCCGGGTAGCTATACAGGCTTGCGAATTGCGGTAGCAACTGCTAAGACCTTAGC
TCACACCCTGAACATCGAGTTGGTTGGTATGTCGAGTCTCTTGGCTCTGGTGCCCCATCAACAAGAAGGTTTGTTTGTCCCCT
TGATGGATGCGCGTCGCAATAATGTTTATGCAGGATTTTATGAAAATGCCAAACCTGTCATGGCAGAAGCGCACCTATCTTTT
GAAGAGGTGCTAGAAAAAGTCAAGGGTACTAGTCAGGTAACCTTTGTCGGAGAAGTTGGCCCCTTTGTTGAGCAGATTCAAA
AACACTTGCCAAGGACTGATTACAAAGAAACATTGCCCAATGCAGCTAATCTAGCTCTTTTGGCCTGGGACAAGGAAGCAGA
CTCCTTGCATGATTTTGTGCCGAATTACCTCAAACGAGTCGAGGCTGAGGAAAACTGGCTCAAGAACCATACCGAGTCTGGC
GAGTCTTACATTAAACGCCTATGA

4149.3 (SEQ. ID. NO. 264)
ATGATAGAAATCAAGCGAATTCAACAACAGCCTGACCTAGCTCAAGCCATCTACGCTGTTATGGCAGCTGTTTACCTAGTCA
GTCCTTGGACTCTGGAGCAAATCCAAGCAGATCTGTCCCAAGACCAGACTTGGTATGCATTGGCTTATGATGGGGCAGAAGT
GATTGGATTTCTAGCTGTGCAGGAGAATCTTTTTGAAGCAGAAGTCCTGCAAATCGCTGTCAAAGGAGCTTATCAGGGTCAG
GGGATTGCGTCagCCTTGTTTGCTCAATTGCCGACAGACAAGGAAATTTTCCTCGAAGTCAGACAGTCAAATCAACGAGCGCA
AGCATTTTACAAGAAAGAAAAGATGACAGTTATCGCTGAGCGAAAGGCCTACTACCATGACCCAGTCGAGGACGCCATTATC
ATGAAGAGAGAAATAGATGAAGGATAG

4152.2 (SEQ. ID. NO. 265)
ATGACAAAACAAGTCTTATTAGTGGATGATGAAGAACACATTCTGAAATTGCTTGACTACCATTTAAGTAAGGAAGGCTTTT
CTACTCAATTGGTGACAAATGGACGGAAGGCCTTAGCTTTGGCAGAAACAGAACCCTTTGATTTTATCTTGCTTGATATCATG
TTACCACAATTAGATGGCATGGAAGTTTGTAAGCGGCTGAGAGCCAAAGGCGTCAAAACTCCAATTATGATGGTTTCTGCGA
AAAGTGATGAATTTGATAAGGTTTTGGCCTTGGAATTAGGGGCTGATGACTACCTGACCAAGCCTTTTAGCCCTAGAGAATT
GCTGGCGCGTGTCAAGGCTGTCCTCAGGCGAACTAAAGGAGAACAAGAAGGAGATGATTCAGATAATATCGCTGACGATTC
TTGGCTATTTGGGACCTTGAAAGTATACCCTGAGCGTCATGAAGTCTACAAGGCGAATAAGTTACTGAGTTTGACCCCAAAA
GAATTTGAAAGCGATAAAAATCCGTTTTTTGAAGTTTTCAAAGTTTCGAAAGTAACCGCCCAATAA

4154.1 (SEQ. ID. NO. 266)
ATGACTACTTTTAAAGATGGATTTTTATGGGGTGGTGCTGTTGCTGCTCATCAACTTGAAGGTGGATGGCAAGAAGGTGGCA
AGGGAATTAGTGTTGCTGATGTTATGACTGCTGGTCGTCATGGAGTAGCTCGTGAAATTACTTTGGGAGTTTTAGAGGGTAAA
TATTATCCAAATCATGAGGCGATAGATTTTTATCACCGTTATAAAGAAGATATAGCACTTTTTGCTGAAATGGGATTCAAGTG
CTTCCGTACCTCTATTGCATGGACACGTATCTTTCCAAAAGGTGATGAGTTAGAGCCGAATGAAGAAGGATTACAGTTTTATG
ATAATCTTTTTGATGAATGCTTAAAGAATGGTATTGAACCTGTCATCACTCTATCTCATTTTGAAATGCCTTATCACTTAGTGA
CCGAATATGGTGGTTGGAAAAATAGGAAATTGATTGATTTCTTTGCTCGTTTTGCAGAAGTCGTATTTAAACGTTACAAAGAT
AAGGTTAAATATTGGATGACTTTCAATGAAATCAATAATCAAGCGAATTATCAGGAAGATTTTGCACCATTTACTAACTCAG
GTATTGTATATGAGGAAGGTGATAATAGAGAAGCAATTATGTATCAAGCAGCACATTACGAATTAGTTGCTTCTGCACGAGC
TGTAAAAATTGGTCATGAGATTAATCCAGATTTTCAAATAGGTTGTATGATTGCGATGTGTCCAATTTATCCAGTTACTTGCA
ATCCTAAGGATATCTTAATGGCAATGAAAGCTATGCAGAAGCGTTATTATTTTGCTGATGTGCATGTTTTAGGTAAATATCCT
GAGCATATTTTCAAGTATTGGGAACGAAAAGGTATTTCAGTTGATTTTACTGCCCAGGATAAAGAAGATTTACTTGGTGGGA
CTGTAGATTACATTGGTTTCAGTTACTATATGTCCTTTGCTATCGACTCTCATCGTGAAAATAATCCTTATTTTGATTATCTTG
AAACAGAAGATTTAGTGAAAAATAATTATGTTAAGGCTTCTGAATGGGAGTGGCAAATTGATCCAGAAGGTTTGCGTTATGC
GTTAAATTGGTTTACAGACCACTATCACTTACCACTCTTTATTGTTGAAAATGGTTTTGGAGCTATAGATCAAGTTGCAGCAG
ATGGTATGGTACATGATGATTATAGAATTGAATATCTAGGTGCCCATATTCGTGAAATGAAAAAGGCTGTAGTTGAAGATGG
TGTTGATTTAATTGGGTTATACTCCATGGGGATGTATTGATTTGGTTTCAGCTGGTACCGGTGAAATGCGGAAACGTTATGGCT
TTATTTATGTAGATAAAGATGATAATGGGAAGGGAAGTTATAATCGTTCCCCGAAAAAATCTTTTGGCTGGTATAAGGAAGT
TATTTCATCTAACGGTGAATCAGTAGAATAG

4154.2 (SEQ. ID. NO. 267)
ATGGATCAACAAAACGGGTTGTTTGGTTTTCTTGAAAACCATGTTATGGGACCAATGGGCAAACTTGCTCAGTTTAAAGTAGT
ACGTGCTATCACGGCTGCAGGTATGGCTGCTGTACCATTTACTATTGTAGGATCAATGTTTTTGGTATTCAGTATTTTGCCACA
AGCTTTCTCATTTTGGCCAATTGTGGCAGATATTTTCTCTGCTTCATTTGATAAATTCACATCACTTTACATGGTTGCAAACTA
TGCGACTATGGGTTCTCTATCTCTTTATTTCGTTCTATCACTTGCATATGAATTGACAAAAATTTATGCAGAGGAAGAAGAAC
TCAATATGAATCCTCTTAATGGTGCCTTGCTTGCCTTGATGGCTTTTGTCATGACAGTACCGCAAATCATTTTTGATGGTGGAA
TGATGAAGACTGTGACAAGTCTAAAAGAAGGTGCAGTAATTGCAGATGGATGGGCAATGGGAAATGTAGTCGCACGTTTTG

GGACAACAGGGATTTTTACCGCAATCATTATGGCAATTGTGACTGTTCTTATTTATCGTATGTGTGTTAAACATAATTGGGTT
ATTAAAATGCCTGAAGCTGTTCCAGAAGGAGTTTCTCGTGGATTTACCGCTTTGGTTCCGGGATTTGTTGTTGCATTTGTTGTT
ATCTTTATCAACGGTCTTCTTGTAGCAATGGGAACAGATATTTTTAAAGTCATTGCAATTCCATTTGGTTTTGTATCCAATCTG
ACTAATTCGTGGATTGGTTTAATGATTATTTATCTATTGACTCAACTACTTTGGATTGTAGGTATCCACGGTGCGAACATTGTT
TTTGCATTTGTTAGTCCAATTGCTCTTGCTAACATGGCTGAAAATGCTGCTGGCGGGCACTTCGCTGTTGCAGGTGAATTTTCT
AATATGTTTGTAATTGCAGGTGGTTCTGGTGCAACTTTAGGACTATGTTTATATATTGCTTTTGCCTCTAAATCTGAACAGCTT
AAAGCAATAGGACGAGCATCTGTAGTTCCAGCCTTATTTAATATTAATGAACCATTAATTTTTGGATTACCTATTATCTATAA
TCCAGCCTTGGCTATACCATTTATTTTAGCACCAATGGTTACTGCTACTATTTATTACGTAGCGAATTCTCTAAACTTTATTAA
GCCAATTATCGCACAGGTTCCATGGCCAACTCCAGTAGGGATTGGAGCTTTCTTAGGGACAGCAGATCTTCGAGCTGTATTA
GTTGCTCTAGTATGTGCATTTGCAGCATTCCTAGTCTATCTTCCATTCATCCGTGTATATGATCAAAAATTGGTGAAAGAAGA
GCAAGGTATCTAA

4155.1 (SEQ. ID. NO. 268)
ATGAAAAAATTTTATGTAAGTCCAATTTTTCCTATTCTAGTAGGATTGATTGCGTTTGGAGTCTTATCCACTTTCATTATTTTT
GTTAATAATAATCTGTTGACGGTTTTAATTTTGTTTCTTTTTGTAGGAGGCTATGTTTTTTTATTTAAGAAACTGAGAGTGCAT
TATACAAGGAGTGATGTAGAACAGATACAGTATGTAAACCACCAAGCGGAAGAAAGTTTGACAGCTCTATTGGAACAGATG
CCTGTAGGTGTTATGAAATTGAATTTATCTTCTGGAGAGGTTGAGTGGTTTAATCCCTATGCTGAATTGATTTTGACCAAGGA
AGATGGTGATTTTGATTTAGAAGCTGTTCAAACGATTATCAAGGCTTCAGTAGGAAATCCGTCTACTTATGCCAAGCTTGGTG
AGAAGCGTTATGCTGTTCATATGGATGCTTCTTCCGGTGTTTTGTATTTTGTAGATGTATCCAGGGAACAAGCCATAACAGAT
GAATTGGTAACAAGTAGACCAGTGATTGGGATTGTCTCTGTGGATAATTATGATGATTTGGAGGATGAAACTTCTGAGTCAG
ATATTAGTCAAATCAATAGTTTTGTAGCTAATTTTATATCAGAGTTTTCAGAAAAACACATGATGTTTTCTCGTCGGGTAAGT
ATGGATCGATTTTATCTATTTACTGACTACACGGTGCTTGAGGGCTTGATGAATGATAAATTTTCTGTTATTGATGCTTTCAGA
GAAGAGTCGAAACAGAGACAGTTGCCCTTGACCTTAAGTATGGGATTTTCTTATGGCGATGGAAATCATGATGAGATAGGGA
AAGTTGCTTTGCTCAATTTGAACTTGGCTGAAGTACGTGGTGGCGACCAGGTGGTTGTTAAGGAAAACGACGAAACGAAAAA
TCCAGTTTATTTTGGTGGTGGGTCTGCTGCTTCAATCAAGCGTACACGGACTCGTACGCGCGCTATGATGACAGCTATTTCAG
ATAAGATTCGGAGTGTAGATCAGGTTTTTGTAGTCGGTCACAAAAATTTAGACATGGATGCTTTGGGCTCTGCTGTAGGTATG
CAGTTGTTCGCCAGCAATGTGATTGAAAATAGCTATGCTCTTTATGATGAAGAACAAATGTCTCCAGATATTGAACGAGCTGT
TTCATTCATAGAAAAAGAAGGAGTTACGAAGTTGTTGTCTGTTAAGGATGCAATGGGGATGGTGACCAATCGTTCTTTGTTG
ATTCTTGTAGACCATTCAAAGACAGCCTTAACATTATCAAAAGAATTTTATGATTTATTTACCCAAACCATTGTTATTGACCA
CCATAGAAGGGATCAGGATTTTCCAGATAATGCGGTTATTACTTATATCGAAAGTGGTGCAAGTAGTGCCAGTGAGTTGGTA
ACGGAATTGATTCAGTTCCAGAATTCTAAGAAAAATCGTTTGAGTCGTATGCAAGCAAGTGTCTTGATGGCTGGTATGATGTT
GGATACTAAAAATTTCACCTCGCGAGTAACTAGTCGGACATTTGATGTTGCTAGCTATCTCAGAACGCGCGGAAGTGATAGT
ATTGCTATCCAGGAAATCGCTGCGACAGATTTTGAAGAATATCGTGAGGTCAATGAACTTATTTTACAGGGGCGTAAATTAG
GTTCAGATGTACTAATAGCAGAGGCTAAGGACATGAAATGCTATGATACAGTTGTTATTAGTAAGGCAGCAGATGCCATGTT
AGCCATGTCAGGTATTGAAGCGAGTTTTGTTCTTGCGAAGAATACACAAGGATTTATCTCTATCTCAGCTCGAAGTCGTAGTA
AACTGAATGTACAACGGATTATGGAAGAGTTAGGCGGTGGAGGCCACTTTAATTTGGCAGCAGCTCAAATTAAAGATGTAAC
CTTGTCAGAAGCAGGTGAAAAACTGACAGAAATTGTATTAAATGAAATGAAGGAAAAGGAGAAAGAAGAATGA

4156.1 (SEQ. ID. NO. 269)
ATGAAAGAGAAAAATATGTGGAAAGAATTGTTGAATCGTGCAGGCTGGATTTTGGTCTTTTTACTTGCCGTCCTTTTATATCA
GGTTCCCCTAGTGGTTACCTCTATTTTGACTTTAAAAGAAGTAGCCCTGCTACAGTCAGGGCTGATAGTTGCTGGCCTTTCAA
TTGTGGTTCTGGCTCTATTTATTATGGGAGCTCGTAAAACCAAGTTAGCTAGTTTTAATTTTTCTTTTTTTAGAGCTAAAGATT
TGGCACGTTTGGGCTTGAGTTATCTAGTTATTGTCGGGTCAAATATACTTGGTTCCATTTTATTGCAACTGTCAAATGAGACG
ACAACAGCTAACCAGTCTCAGATTAATGATATGGTTCAAAATAGTTCGTTGATTTCCAGTTTCTTCTTGCTAGCCTTGCTTGCT
CCGATTTGTGAGGAAATCTTGTGTCGTGGGATTGTTCCTAAAAAGATTTTCCGAGGCAAGGAGAACTTGGGATTTGTAGTCG
GTACGATTGTGTTTGCTTTATTGCATCAACCAAGTAATTTACCTTCTTTATTGATTTATGGAGGTATGTCGACAGTTCTATCTT
GGACAGCCTACAAGACCCAACGTTTGGAAATGTCGATCTTGCTTCACATGATTGTTAATGGGATTGCTTTCTGTTTGTTGGCT
CTTGTGGTGATTATGAGTCGGACATTAGGAATTTCTGTTTAAATGAAAGAGAAAAATATGTGGAAAGAATTGTTGAATCGTG
CAGGCTGGATTTTGGTCTTTTTACTTGCCGTCCTTTTATATCAGGTTCCCCTAGTGGTTACCTCTATTTTGACTTTAAAAGAAG
TAGCCCTGCTACAGTCAGGGCTGATAGTTGCTGGCCTTTCAATTGTGGTTCTGGCTCTATTTATTATGGGAGCTCGTAAAACC
AAGTTAGCTAGTTTTAATTTTTCTTTTTTTAGAGCTAAAGATTTGGCACGTTTGGGCTTGAGTTATCTAGTTATTGTCGGGTCA
AATATACTTGGTTCCATTTTATTGCAACTGTCAAATGAGACGACAACAGCTAACCAGTCTCAGATTAATGATATGGTTCAAAA
TAGTTCGTTGATTTCCAGTTTCTTCTTGCTAGCCTTGCTTGCTCCGATTTGTGAGGAAATCTTGTGTCGTGGGATTGTTCCTAA
AAAGATTTTCCGAGGCAAGGAGAACTTGGGATTTGTAGTCGGTACGATTGTGTTTGCTTTATTGCATCAACCAAGTAATTTAC
CTTCTTTATTGATTTATGGAGGTATGTCGACAGTTCTATCTTGGACAGCCTACAAGACCCAACGTTTGGAAATGTCGATCTTG
CTTCACATGATTGTTAATGGGATTGCTTTCTGTTTGTTGGCTCTTGTGGTGATTATGAGTCGGACATTAGGAATTTCTGTTTAA

4156.4 (SEQ. ID. NO. 270)
ATGGATACACAAAAGATTGAAGCGGCTGTAAAAATGATTATCGAGGCTGTAGGAGAGGACGCTAATCGCGAGGGCTTGCAG
GAAACACCTGCTCGTGTAGCCCGTATGTATCAAGAGATTTTTTCAGGTCTTGGTCAAACAGCAGAGGAACATTTGTCAAAAT
CCTTTGAAATTATTGACGATAATATGGTGGTAGAAAAGGATATCTTTTTCCATACCATGTGTGAACACCACTTCTTGCCATTTT
ATGGTAGAGCGCACATTGCCTACATTCCAGATGGTCGTGTGGCAGGCTTGTCTAAGCTAGCCCGTACGGTTGAAGTTTATTCG
AAAAAACCACAAATTCAAGAACGTTTGAATATCGAAGTGGCCGATGCCTTGATGGACTATCTAGGTGCTAAAGGAGCCTTTG
TTGTCATTGAGGCGGAACATATGTGTATGAGTATGCGTGGTGTTAGAAAACCAGGCACTGCAACCTTGACGACAGTAGCTCG
TGGTCTATTTGAAACAGATAAGGATCTCCGTGACCAAGCTTATCGTTTAATGGGGCTATAA

4157.2 (SEQ. ID. NO. 271)
ATGAAAGACTTGTTTTTAAAGAGAAAGCAGGCCTTTCGTAAGGAGTGTCTTGGTTATCTGCGCTATGTGCTCAATGACCACTT
TGTCTTGTTCCTGCTTGTCCTGTTGGGCTTTCTAGCCTACCAGTACAGTCAACTCTTACAACATTTTCCTGAAAATCATTGGCC
TATCCTTTTGTTTGTAGGAATTACGTCTGTTTTACTTTTACTTTGGGGAGGAACTGCCACCTATATGGAGGCTCCAGACAAGCT
CTTTCTCTTAGTTGGAGAAGAGGAAATTAAGCTCCATCTCAAGCGTCAAACTGGCATTTCCCTAGTCTTTTGGCTCTTTGTACA
GACCCTTTTCTTGCTGTTATTTGCGCCTTTATTTTTAGCAATGGGTTATGGCTTGCCAGTTTTTCTGCTCTATGTGCTTTTATTG
GGGGTAGGAAAATATTTCCACTTTTGTCAAAAGGCCAGCAAATTTTTCACTGAAACTGGACTGGACTGGGACTATGTTATTTC
TCAAGAAAGCAAGCGTAAGCAAGTCTTGCTTCGTTTCTTTGCCCTCTTTACGCAGGTCAAGGGAATTTCAAACAGCGTTAAGC
GTCGTGCCTATCTGGACTTTATTTTAAAGGCTGTTCAGAAGGTGCCTGGGAAGATTTGGCAAAATCTCTATCTGCGTTCTTAT

CTGCGAAATGGCGACCTCTTTGCTCTCAGTCTTCGTCTTCTCTTGCTTTCCTTGCTGGCGCAGGTTTTTATCGAGCAAGCTTGG
ATTGCGACAGCAGTGGTAGTTCTCTTTAACTACCTCTTGCTCTTCCAGTTGCTGGCCCTCTATCATGCCTTTGACTACCAGTAT
TTGACCCAACTCTTTCCGCTGGACAAGGGGCAAAAGGAAAAAGGCTTACAGGAGGTAGTTCGAGGATTGACCAGTTTTGTTT
TACTTGTGGAATTAGTTGTTGGGTTGATTACCTTCCAAGAAAAACTAGCCCTTCTAGCCTTACTAGGAGCTGGTTTGGTTTTAC
TAGTCTTGTATTTGCCTTATCAGGTAAAACGTCAGATGCAGGACTAA

4158.1 (SEQ. ID. NO. 272)
ATGAGAAAATCAATAGTATTAGCGGCAGATAATGCCTATCTTATTCCTTTAGAGACGACTATAAAGTCTGTATTGTATCACAA
TAGAGATGTTGATTTTTATATTCTCAACAGTGATATAGCTCCTGAATGGTTTAAATTATTGGGGAGAAAAATGGAAGTTGTGA
ATTCTACAATTCGCAGTGTACACATTGATAAAGAACTTTTTGAAAGCTATAAAACAGGACCTCATATAAATTATGCTTCTTAC
TTTAGATTTTTTGCGACAGAAGTGGTTGAATCTGATAGGGTATTGTATCTGGATTCCGATATCATTGTAACTGGGGAACTAGC
TACTTTGTTTGAGATAGATCTCAAAGGATATTCAATTGGTGCTGTTGATGATGTCTATGCCTATGAAGGACGAAAATCTGGAT
TTAATACTGGTATGTTACTAATGGATGTTGCAAAGTGGAAAGAACATTCTATTGTCAATAGTTTATTGGAATTAGCGGCCGAG
CAGAATCAAGTTGTTCATCTTGGGGATCAGAGTATTTTAAATATTTATTTTGAGGATAATTGGCTAGCCTTAGATAAAACATA
TAATTATATGGTGGGTATTGATATTTATCACCTTGCTCAAGAATGTGAACGTCTAGATGACAATCCACCTACAATTGTTCACT
ATGCTAGTCATGATAAACCTTGGAATACATATAGTATATCTAGACTACGTGAATTATGGTGGGTTTATAGAGATTTGGATTGG
TCAGAGATTGCTTTTCAACGTTCCGATTTAAATTATTTTGAAAGAAGCAATCAGTCTAAAAAACAAGTGATGCTTGTGACATG
GAGTGCAGATATAAAACATTTAGAGTATTTAGTACAACGGTTACCTGATTGGCATTTTCATTTGGCTGCACCGTGTGATTGTT
CTGAGGAGCTGACCTCTCTATCACAGTATACGAATGTAACAGTATATCAAAATGTATTACATAGTAGAATTGATTGGCTATTG
GACGATTCTATAGTTTATTTAGATATTAATACAGGTGGAGAGGTTTTTAATGTAGTTACAAGGGCACAAGAAAGTGGCAAGA
AAATCTTCGCTTTTGATATCACACGTAAAAGTATGGATGATGGACTCTATGACGGTATTTTTTCTGTGGAGAGACCAGATGAT
TTAGTGGATAGAATGAAGAATATAGAGATAGAGTAA

4158.2 (SEQ. ID. NO. 273)
ATGACTAAGATTTATTCGTCAATAGCAGTAAAAAAAGGACTATTTACCTCATTTCTACTGTTTATCTATGTATTGGGAAGTCG
TATTATTCTCCCTTTTGTTGACCTAAATACTAAAGATTTTTTAGGAGGTTCAACAGCCTATCTAGCCTTCTCAGCCGCCCTAAC
AGGTGGGAATCTAAGAAGTTTATCAATTTTTTCTGTTGGATTATCCCCTTGGATGTCCGCCATGATTTTATGGCAGATGTTTTC
TTTTTCTAAACGGTTGGGTTTAACATCTACGTCTATAGAAATACAAGATCGCCGTAAAATGTACCTGACCTTGCTAATTGCTG
TGATTCAATCCTTGGCAGTTAGCTTGAGACTGCCAGTACAATCCTCCTATTCTGCAATATTGGTTGTTCTAATGAATACAATAT
TGCTGATAGCAGGAACATTTTTTCTTGTTTGGTTGTCAGATTTAAATGCGAGTATGGGGATTGGAGGTTCTATTGTAATCCTCC
TATCCAGTATGGTTTTAAATATTCCTCAGGATGTTTTGGAAACATTTCAGACAGTACACATTCCAACAGGGATTATTGTGTTA
CTTGCTTTATTAACCCTTGTCTTTTCTTATTTACTTGCCCTTATGTATCGAGCTCGCTATTTGGTTCCTGTTAATAAAATTGGCT
TACACAATCGATTTAAACGCTATTCTTATCTCGAAATCATGTTGAATCCTGCAGGTGGGATGCCTTATATGTATGTGATGAGT
TTTCTTAGTGTACCAGCTTATTTGTTCATCTTGTTGGGATTTATTTTCCCTAATCATTCAGGGTTAGCGGCTTTATCAAAGGAA
TTTATGGTTGGAAAGCCTTTGTGGGTCTATGTTTATATTTCGGTCTTATTTTTATTTAGTATCATTTTTGCTTTTGTTACGATGA
ATGGAGAAGAGATTGCAGACCGTATGAAAAAATCTGGAGAATACATTTATGGTATTTATCCAGGTGCGGATACTAGTCGATT
TATTAATCGATTGGTCCTTCGTTTCTCAGTCATAGGTGGTCTCTTTAATGTGATTATGGCAGGTGGTCCCATGCTTTTTGTTTTG
TTTGATGAAAAGTTATTACGATTGGCAATGATTCCAGGCTTATTTATGATGTTCGGGGGCATGATTTTTACGATTAGAGACGA
GGTCAAGGCTTTAAGGCTAAATGAGACCTATAGACCTTTGATTTAG

4158.3 (SEQ. ID. NO. 274)
ATGTCCTCTCTTTCGGATCAAGAATTAGTAGCTAAAACAGTAGAGTTTCGTCAGCGTCTTTCCGAGGGAGAAAGTCTAGACG
ATATTTTGGTTGAAGCTTTTGCTGTGGTGCGTGAAGCAGATAAGCGGATTTTAGGGATGTTTCCTTATGATGTTCAAGTCATG
GGAGCTATTGTCATGCACTATGGAAATGTTGCTGAGATGAATACGGGGGAAGGTAAGACCTTGACAGCTACCATGCCTGTCT
ATTTGAACGCTTTTTCAGGAGAAGGAGTGATGGTTGTGACTCCTAATGAGTATTTATCAAAGCGTGATGCCGAGGAAATGGG
TCAAGTTTATCGTTTTCTAGGATTGACCATTGGTGTACCATTTACGGAAGATCCAAAGAAGGAGATGAAAGCTGAAGAAAAG
AAGCTTATCTATGCTTCGGATATCATCTACACAACCAATAGTAATTTAGGTTTTGATTATCTAAATGATAACCTAGCCTCGAA
TGAAGAAGGTAAGTTTTTACGACCGTTTAACTATGTGATTATTGATGAAATTGATGATATCTTGCTTGATAGTGCACAAACTC
CTCTGATTATTGCGGGTTCTCCTCGTGTTCAGTCTAATTACTATGCGATCATTGATACACTTGTAACAACCTTGGTCGAAGGA
GAGGATTATATCTTTAAAGAGGAGAAAGAGGAGGTTTGGCTCACTACTAAGGGGGCCAAGTCTGCTGAGAATTTCCTAGGGA
TTGATAATTTATACAAGGAAGAGCATGCGTCTTTTGCTCGTCATTTGGTTTATGCGATTCGAGCTCATAAGCTCTTTACTAAA
GATAAGGACTATATCATTCGTGGAAATGAGATGGTACTGGTTGATAAGGGAACAGGGCGTCTAATGGAAATGACTAAACTTC
AAGGAGGTCTCCATCAGGCTATTGAAGCCAAGGAACATGTCAAATTATCTCCTGAGACGCGGGCTATGGCCTCGATCACCTA
TCAGAGTCTTTTTAAGATGTTTAATAAGATATCTGGTATGACAGGGACAGGTAAGGTCGCGGAAAAAGAGTTTATTGAAACT
TACAATATGTCTGTAGTACGCATTCCAACCAATCGTCCGAGACAACGGA
TTGACTATCCAGATAATCTATATATCACTTTACCTGAAAAAGTGTATGCATCCTTGGAGTACATCAAGCAATACCATGCTAAG
GGAAATCCTTTACTCGTTTTTGTAGGCTCAGTTGAAATGTCTCAACTCTATTCGTCTCTCTTGTTTCGTGAAGGGATTGCCCAT
AATGTCCTAAATGCTAATAATGCGGCGCGTGAGGCTCAGATTATCTCCGAGTCAGGTCAGATGGGGGCTGTGACAGTGGCTA
CCTCTATGGCAGGACGTGGTACGGATATCAAGCTTGGTAAAGGAGTCGCAGAGCTTGGGGGCTTGATTGTTATTGGGACTGA
GCGGATGGAAAGTCAGCGGATCGACCTACAAATTCGTGGCCGTTCTGGTCGTCAGGGAGATCCTGGTATGAGTAAATTTTTT
GTATCCTTAGAGGATGATGTTATCAAGAAATTTGGTCCATCTTGGGTGCATAAAAAGTACAAAGACTATCAGGTTCAAGATA
TGACTCAACCGGAAGTATTGAAAGGTCGTAAATACCGGAAACTAGTCGAAAAGGCTCAGCATGCCAGTGATAGTGCTGGAC
GTTCAGCACGTCGTCAGACTCTGGAGTATGCTGAAAGTATGAATATACAACGGGATATAGTCTATAAAGAGAGAAATCGTCT
AATAGATGGTTCTCGTGACTTAGAGGATGTTGTTGTGGATATCATTGAGAGATATACAGAAGAGGTAGCGGCTGATCACTAT
GCTAGTCGTGAATTATTGTTTCACTTTATTGTGACCAATATTAGTTTTCATGTTAAAGAGGTTCCAGATTATATAGATGTAACT
GACAAAACTGCAGTTCGTAGCTTTATGAAGCAGGTGATTGATAAAGAACTTTCTGAAAAGAAAGAATTACTTAATCAACATG
ACTTATATGAACAGTTTTTACGACTTTCACTGCTTAAAGCCATTGATGACAACTGGGTAGAGCAGGTAGACTATCTACAACAG
CTATCCATGGCTATCGGTGGTCAATCTGCTAGTCAGAAAAATCCAATCGTAGAGTACTATCAAGAAGCCTACGCGGGCTTTG
AAGCTATGAAAGAACAGATTCATGCGGATATGGTGCGTAATCTCCTGATGGGGCTGGTTGAGGTCACTCCAAAAGGTGAAAT
CGTGACTCATTTTCCATAA

4158.4 (SEQ. ID. NO. 275)
ATGATAGGGACTTTCGCCGCTGCTCTTGTAGCTGTACTAGCAAATTTCATCGTCCCTATTGAAATTACCCCAAATAGTGCCAA
TACTGAAATTGCACCACCAGATGGGATTGGGCAGGTTCTCAGCAACCTCTTGCTCAAACTGGTTGACAACCCAGTCAACGCC
CTGCTTACTGCTAACTATATTAGAATCTTATCTTGGGCAGTCATTTTTGGAATCGCTATGAGAGAAGCCAGTAAAAATAGTCA

AGAATTGCTAAAAACTATCGCTGACGTGACTTCTAAAATTGTCGAATGGATCATCAATCTGGCTCCATTTGGAATCCTTGGTC
TTGTTTTTAAAACCATTTCTGACAAGGGAGTCGGAAGCCTTGCCAACTACGGTATTTTATTGGTTCTATTAGTAACGACTATG
CTTTTTGTTGCCCCTGTGGTCAACCCTTTGATTGCCTTCTTCTTTATGAGACGCAATCCTTACCCTCTAGTTTGGAACTGCCTCC
GTGTCAGCGGTGTGACAGCCTTTTTCACTCGTAGTTCTGCGACTAACATTCCTGTCACATGAAACTCTGCCATGACCTTGGA
CTCAACCCAGATACCTATTCTGTTTCTATCCCACTCGGTTCTACTATCAATATGGCTGGAGTAGCGATTACCATTAACCTTTTG
ACCCTTGCTGCAGTTAACACTCTTGGAATTCCTGTTGACTTTGCCACAGCCTTTGTCCTCAGTGTGGTAGCAGCTATCTCATCC
TGTGATGCTTCAGGTATTGCCGGAGGTTCCCTCCTTCTTATCCCAGTTGCTTGTAGCCTTTTCGGTATTTCTAACGATATTGCC
ATACAAATTGTTGGGGTTGGTTTTGTGATTGGTGTCATCCAAGACTCATGTGAAACAGCCCTTAACTCTTCTACAGATGTCCT
CTTTACCGCCGTTGCCGAATACGCAGCAACCCGTAAAAAATAA

4158.5 (SEQ. ID. NO. 276)
ATGTCTATTAGCCAACGTACGACCAAGCTCATCTTAGCTACCTGTCTTGCCTGCCTGCTTGCTTATTTTCTCAATCTTTCGTCA
GCAGTTTCGGCTGGAATTATCGCTCTCTTGAGCCTATCTGATACGCGTAGAAGTACTTTAAAACTGGCTCGCAATCGTCTTTTT
TCTATGCTTCTAGCTCTGGCTATCGGTGTTCTAGCTTTTCACTTGAGCGGATTTCATATCTGGAGTCTCGGCCTCTATCTGGCC
TTCTACGTTCCTTTAGCCTACAAGATGGGCTGGGAAATTGGCATCACACCAAGCACTGTTTTGGTTAGCCATCTCTTGGTTCA
AGAGTCAACCTCTCCAGACCTTCTAGTCAATGAATTCCTTCTCTTTGCTATTGGTACAGGATTTGCCTTGCTTGTTAATCTCTA
TATGCCTTCACGAGAAGAGGAAATCCAGCACTACCACACGCTGGTGGAAGAAAAGTTAAAAGATATCCTCCAGCGCTTCAA
ATACTATTTATCCAGAGGAGACGGACGCAACCGAGCACAGCTGGTAGCAGAATTAGACACGCTTTTGAAAGAAGCCCTCAG
ACTGGTCTATTTGGATCACTCTGACCACCTCTTTCACCAGACAGACTACCATATCCACTACTTTGAGATGAGACAGCGACAAA
GTCGTATCCTGAGAAACATGGCCCAACAGATTAACACTTGTCACCTTGCCGCCAGTGAAAGCCTGATCTTAGCGCAACTCTTT
TCAAAAATTGCAGGTCAACTGAGCCAGACCAATCCTGCTTCTGATTTGCTAGATGAAATTGAACGTTATCTGGAAGTCTTCCG
GAACCGCAGTCTGCCCAAGACAAGAGAAGAATTTGAAACCCGCGCCACCCTTCTTCAACTCCTACGTGAAGCCAAAACCTTC
ATCCAAGTAAAAGTTGATTTTTACCAAAAATATAGACAGTAA

4158.6 (SEQ. ID. NO. 277)
ATGGAAATCATGTCGCTTGCGATTGCTGTTTTTGCCGTCATCATTGGTTTAGTCATTGGATATGTCAGCATCTCAGCTAAGATG
AAATCATCTCAGGAAGCTGCAGAGTTGATGCTTTTAAATGCTGAACAAGAAGCAACTAATTTACGTGGACAAGCTGAGCGTG
AAGCGGATTTACTTGTTAATGAAGCCAAACGTGAAAGCAAGTCTCTTAAAAAAGAAGCACTATTGGAGGCCAAAGAAGAAG
CCAGAAAATACCGTGAAGAAGTGGACGCTGAATTCAAATCAGAACGTCAAGAACTCAAACAAATCGAAAGTCGTTTGACAG
AGAGAGCTACTAGCCTTGACCGTAAGGACGACAATTTGACGAGTAAAGAACAAACACTTGAACAAAAAGAACAAAGTATTT
CTGATAGAGCGAAAAACCTTGATGCGCGTGAAGAGCAATTAGAGGAAGTCGAAAGACAAAAAGAAGCAGAACTAGAGCGT
ATTGGTGCGCTGTCTCAGGCAGAAGCACGAGATATTATCTTGGCTCAGACAGAGGAAAACTTGACCAGGGAGATTGCCAGTC
GCATTCGCGAAGCTGAGCAAGAGGTCAAGGAACGTTCTGACAAAATGGCCAAGGACATCTTGGTTCAAGCTATGCAACGTAT
CGCTGGTGAATATGTAGCGGAGTCAACAAACTCAACAGTTCATCTGCCAGACGATACTATGAAGGGACGCATTATTGGTCGT
GAAGGTCGTAACATTCGTACCTTTGAAAGTTTGACAGGGGTCGATGTGATTATCGACGATACACCAGAAGTGGTGACCTTGT
CAGGATTTGATCCGATTCGTCGTGAGATTGCCCGTATGACTATGGAAATGTTGCTCAAAGATGGTCGTATACATCCAGCTCGT
ATCGAAGAGTTGGTTGAGAAAAACCGTCAAGAGATTGACAATAAGATTCGTGAATACGGTGAGGCTGCTGCCTATGAAATTG
GTGCGCCAAACCTTCATCCAGACTTGATGAAGATTATGGGACGTTTGCAGTTCCGTACTTCATATGGACAAAATGTTTTGCGC
CATTCGATTGAGGTTGCTAAGTTGGCTGGTATCATGGCGAGCGAACTTGGTGAAAATGCGGCTCTTGCCCGTCGTGCTGGATT
CCTTCACGATATCGGGAAAGCCATTGACCATGAGGTTGAAGGTAGCCACGTTGAAATCGGTATGGAATTGGCCCGTAAGTAC
AAGGAACCCCCAGTTGTGGTGAATACGATTGCTAGTCACCACGGAGATGTTGAAGCTGAGAGCGTGATAGCAGTTATCGTCG
CTGCAGCAGATGCCTTGAGCGCAGCCCGTCCAGGTGCTCGTAGTGAGTCTCTTGAAAGCTACATCAAGCGTCTCCATGATTTG
GAAGAAATTGCTAACGGCTTTGAAGGAGTGCAAACTAGCTTTGCCCTTCAAGCAGGACGTGAAATTCGTATCATGGTCAATC
CAGGAAAAATCAAGGACGACAAAGTCACAATCTTGGCTCACAAAGTTCGTAAGAAAATTGAAAACAATCTCGATTATCCAG
GAAATATCAAGGTAACCGTGATTCGCGAGCTTCGTGCAGTAGATTATGCTAAATAA

4158.7 (SEQ. ID. NO. 278)
ATGATGTTAAAACCCTCTATTGATACCTTGCTCGACAAGGTTCCTTCAAAATATTCACTCGTAATCTTGGAAGCAAAACGTGC
CCACGAATTGGAAGCAGGTGCCCCAGCAACTCAAGGTTTCAAGTCTGAAAAATCAACTCTTCGCGCTTTAGAAGAAATCGAA
TCAGGAAACGTTACAATTCACCCAGATCCAGAAGGAAAACGTGAAGCAGTGCGTCGCCGTATCGAAGAAGAAAAACGCCGC
AAAGAAGAAGAAGAAAAGAAAATCAAAGAGCAAATTGCTAAAGAAAAAGAAGATGGTGAAAAAATTTAA

4161.1 (SEQ. ID. NO. 279)
ATGTCAGCATATCAATTACCGACCGTATGGCAGGATGAAGCTAGTAATCAAGGAGCTTTTACGGGGCTAAACAGACCAACAG
CAGGTGCCCGTTTCGAACAAAACTTGCCAAAAGGAGAACAAGCTTTTCAGCTTTATTCACTGGGAACACCAAATGGTGTGAA
GGTTACTATCTTATTGGAAGAATTACTAGAAGCTGGTTTTAAGGAAGCGGCTTACGACTTGTATAAGATTGCTATCATGGATG
GGGATCAATTCGGATCAGACTTTGTGAAGCTCAATCCAAATTCCAAGATTCCAGCCTTATTGGACCAGTCAGGTACTGAAAA
CGTAAGAGTCTTTGAGTCTGCTCATATTCTTCTTTACCTTGCTGAGAAATTTGGAGCCTTTTTACCAAGTAATCCTGTGGAAAA
GGTAGAAGTTTTGAATTGGCTATTCTGGCAAGCAGGTGCAGCACCTTTTCTAGGTGGGGGATTTGGACATTTCTTCAATTATG
CTCCTGAAAAATTGGAATATCCTATTAACCGTTTTACGATGGAAGTGAAACGCCAGTTGGATTTATTGGATAAGGAATTGGCT
CAGAAACCTTATATTGCAGGCAATGACTATACGATTGCAGATATTGCTATCTGGTCTTGGTATGGACAGTTAGTTCAAGGAA
ATCTTTACCAAGGTTCTGCAAAATTCTTGGATGCCTCAAGTTATCAAAATCTAGTAAAATGGGCAGAAAAAATTGCCAATCG
TCCAGCTGTTAAGCGTGGCTTGGAAGTAACTTATACAGAAATTAAATAG

4161.2 (SEQ. ID. NO. 280)
TTGGCAAGCTTGATCACTTCTATCATCATGTTCTATGTCGGTTTCGATGTTCTAAGAGATACCATTCAAAAGATTCTCAGTCGG
GAAGAAACGGTCATTGATCCTCTTGGTGCAACTCTAGGAATCATTTCTGCAGCGATTATGTTTGTGGTCTATCTCTACAATAC
TCGCCTCAGTAAGAAATCCAACTCCAATGCGCTGAAGGCAGCTGCTAAGGACAATCTTTCTGACGCTGTTACCTCACTTGGA
ACCGCCATTGCCATCCTAGCTAGTAGTTTCAATTATCCGATTGTGGATAAACTGGTTGCTATCATCATCACTTTCTTTATCTTG
AAGACTGCCTATGATATCTTCATCGAGTCTTCCTTTAGTCTTTCAGATGGCTTTGACGACCGCCTGCTCGAGGACTACCAAAA
GGCTATCATGGAAATTCCCAAAATCAGCAAGGTCAAATCGCAAAGAGGTCGCACCTACGGTAGCAACATCTACCTGGATATT
ACACTAGAGATGAATCCTGACTTGTCTGTTTTTGAAAGCCATGAAATCGCGGATCAGGTCGAGTCTATGCTGGAGGAGCGTT
TTGGCGTCTTTGATACCGATGTCCATATCGAACCAGCACCTATCCCTGAGGATGAAATTTTAGACAATGTCTATAAAAAATTG
CTTATGCGTGAACAATTGATTGACCAAGGAAACCAACTAGAAGAACTCTTGACTGATGATTTTGTCTATATTCGCCAAGATG
GAGAGCAGATGGATAAAGAGGCTTATAAGACCAAAAAAGAGTTAAATTCTGCTATCAAGGACATTCAAATTACTTCCATCAG

TCAAAAAACCAAACTCATCTGCTATGAGTTAGATGGTATCATCCATACCAGTATCTGGCGTCGCCACGAAACCTGGCAAAAT
ATCTTTCATCAAGAAACCAAAAAAGAATAG

4162.1 (SEQ. ID. NO. 281)
ATGACAATTAAACTAGTAGCAACGGATATGGACGGAACCTTCCTAGATGGGAATGGACGCTTTGATATGGATCGTCTCAAGT
CTCTCTTGGTTTCCTACAAGGAAAAAGGGATTTACTTTGCGGTAGCTTCGGGTCGGGGATTTCTGTCTCTAGAAAAATTATTT
GCTGGTGTTCGTGATGACATTATTTTCATCGCGGAAAATGGCAGTTTGGTAGAGTATCAAGGTCAGGACTTGTATGAAGCGA
CTATGTCTCGTGACTTTTATCTGGCAACTTTTGAAAAGCTGAAAACTTCACCTTATGTAGATATCAATAAACTGCTCTTGACG
GGTAAGAAGGGTTCATATGTTCTAGATACGGTTGATGAGACCTATTTGAAAGTGAGTCAGCACTATAATGAAAATATCCAAA
AAGTAGCGAGTTTGGAAGATATCACAGATGACATTTTCAAATTTACAACCAACTTCACAGAAGAAACGCTGGAAGATGGGG
AGGCTTGGGTAAACGAAAACGTTCCTGGTGTTAAGGCCATGACAACTGGCTTTGAATCCATTGATATTGTTCTGGACTATGTC
GATAAGGGAGTGGCCATTGTTGAATTAGTTAAAAAACTTGGTATCACAATGGATCAGGTCATGGCTTTTGGAGACAATCTTA
ATGACTTACATATGATGCAGGTTGTGGGACATCCTGTAGCTCCTGAAAATGCACGACCTGAAATTTTAGAATTAGCAAAGAC
TGTGATTGGTCACCATAAGGAACGGTCGGTTATAGCTTATATGGAGGGCTTATAA

4162.2 (SEQ. ID. NO. 282)
ATGGCAGATATAAAATTGATTGCATTGGACTTGGACGGGACCTTGCTGACTACTGATAAAAGGCTGACGGATCGTACCAAGG
AAACCTTGCAAGCTGCGCGTGATCGTGGTATCAAGGTCGTATTGACAACTGGTCGTCCCTTAAAAGCCATGGATTTCTTTCTC
CATGAGTTAGGGACTGACGGTCAGGAAGATGAGTATACCATTACTTTTAATGGTGGATTAGTTCAGAAAAATACAGGAGAAA
TCCTTGATAAAACAGTCTTTTCATATGATGATGTGGCACGTTTGTATGAAGAAACAGAGAAATTATCACTGCCTCTTGATGCC
ATCTCAGAAGGAACAGTTTATCAAATCCAATCGGACCAAGAAAGTCTTTATGCCAAATTCAATCCAGCTTTGACCTTTGTTCC
AGTGGACTTTGAAGACTTATCTAGTCAAATGACCTACAACAAATGCGTGACTGCCTTTGCTCAAGAACCCTTGGATGCAGCC
ATTCAGAAGATTTCTCCAGAATTGTTTGACCAATATGAAATCTTTAAATCACGTGAAATGTTGCTAGAATGGTCACCAAAGA
ATGTTCATAAAGCAACAGGTTTGGCAAAACTAATCAGCCATCTTGGAATCGACCAAAGTCAAGTGATGGCTTGTGGTGACGA
GGCCAATGACCTCTCTATGATTGAATGGGCAGGTCTTGGTGTTGCTATGCAAAACGCTGTTCCTGAAGTAAAGGCAGCCGCA
AATGTAGTGACGCCGATGACCAACGATGAGGAAGCTGTCGCCTGGGCTATCGAAGAATATGTGCTAAAGGAGAACTAA

4164.2 (SEQ. ID. NO. 283)
ATGGAAAGTTTACTTATTCTATTATTAATTGCCAATCTAGCTGGTCTCTTTCTGATTTGGCAAAGGCAGGATAGGCAGGAGAA
ACACTTAAGTAAGAGCTTGGAGGATCAGGCAGATCATTTGTCAGACCAGTTGGATTACCGCTTTGACCAAGCCAGACAAGCC
AGCCAGTTAGACCAAAAAGATTTGGAAGTGGTTGTCAGCGACCGTTTGCAAGAAGTGCGGATTGAATTGCACCAAGGTCTGA
CCCAAGTCCGTCAAGAAATGACAGATAATCTCCTCCAAACTAGAGACAAGACAGACCAACGTCTCCAAGCCTTGCAGGAATC
AAATGAGCAACGTTTGGAACAAATGCGCCAGACGGTCGAGGAAAAACTAGAAAAGACCTTGCAGACACGCTTACAGGCTTC
CTTTGAGACAGTTTCTAAACAACTGGAGTCTGTCAATCGTGGCCTTGGAGAAATGCAGACAGTTGCCCGTGATGTCGGAGCT
CTTAACAAGGTTCTCTCTGGAACCAAGACGCGAGGGATTCTGGGAGAATTGCAACTGGGGCAAATTATTGAAGACATCATGA
CACCTGCCCAGTACGAACGAGAATACGCAACGGTTGAAAACTCTAGTGAACGAGTGGAGTATGCCATCAAGTTACCCGGAC
AAGGCGACCAAGAATACGTCTATCTGCCAATTGACTCTAAGTTTCCACTGGCAGATTATTACCGCTTGGAAGAAGCCTATGA
GACAGGTGACAAGGATGAGATTGAACGCTGTCGTAAGTCACTCCTAGCAAGCGTCAAGCGCTTTGCTAGGGATATTAGGAAC
AAGTACATAGCACCACCTCGGACGACCAATTTTGGAGTTTTGTTTGTTCCGACAGAAGGTCTCTACTCAGAAATCGTCCGCAA
TCCGGTCTTCTTTGATGATTTGAGACGGGAAGAACAGATTATTGTTGCAGGACCAAGTACCCTATCAGCCCTTCTTAACTCCC
TATCAGTTGGTTTCAAGACCCTTAATATCCAAAAGAGTGCCGACCATATCAGCAAGACTCTTGCCAGTGTCAAGACCGAGTTT
GGCAAGTTTGGTGGTATTCTGGTCAAGGCACAAAAACATCTCCAACATGCCTCTGGCAATATTGATGAATTATTAAACCGTC
GTACCATAGCTATCGAGCGGACGCTCCGTCACATTGAGTTGTCAGAAGGTGAGCCTGCGCTTGATCTACTCCATTTTCAAGAA
AATGAGGAAGAATATGAAGATTAG

4164.3 (SEQ. ID. NO. 284)
ATGAAGATTAGTCACATGAAAAAAGATGAGTTATTTGAAGGCTTTTACCTAATCAAATCAGCTGACCTGAGGCAAACTCGAG
CTGGGAAAAACTACCTAGCCTTTACCTTCCAAGATGATAGTGGCGAGATTGATGGGAAGCTCTGGGATGCCCAACCTCATAA
CATTGAGGCCTTTACCGCAGGTAAGGTTGTCCACATGAAAGGACGCCGAGAAGTTTATAACAATACCCCTCAAGTCAATCAA
ATTACTCTCCGCCTGCCTCAAGCTGGTGAACCCAATGACCCAGCTGATTTCAAGGTCAAGTCACCAGTTGATGTCAAGGAAA
TTCGTGACTACATGTCGCAAATGATTTTCAAAATTGAAAATCCTGTCTGGCAACGGATTGTCCGAAATCTCTACACCAAGTAT
GATAAGGAATTCTACTCCTATCCAGCTGCCAAGACCAACCACCATGCCTTTGAAACGGGCTTGGCCTATCATACGGCGACCA
TGGTGCGTTTGGCAGACGCTATTAGCGAAGTTTATCCTCAGCTCAATAAGAGCCTGCTCTATGCGGGGATTATGTTGCATGAC
TTAGCTAAGGTCATCGAGTTGACGGGGCCAGACCAGACAGAGTACACAGTGCGAGGTAATCTTCTTGGACATATCGCTCTCA
TTGATAGCGAAATTACCAAGACAGTTATGGAACTCGGCATCGATGATACCAAGGAAGAAGTCGTTTTGCTTCGTCATGTCAT
CCTCAGTCACCACGGCTTGCTTGAGTATGGAAGCCCAGTCCGTCCACGCATTATGGAAGCAGAGATTATCCATATGATTGAC
AATCTGGATGCAAGCATGATGATGATGTCAACAGCTCTTGCTTTGGTGGATAAAGGAGAGATGACCAATAAAATCTTCGCTA
TGGATAATCGTTCCTTCTATAAACCAGATTTAGATTAA

4166.2 (SEQ. ID. NO. 285)
ATGAGTGAAAAAGCTAAAAAAGGGTTTAAGATGCCTTCATCTTACACCGTATTATTGATAATCATTGCTATTATGGCAGTGCT
AACTTGGTTTATCCCTGCGGGGGCCTTTATAGAAGGTATTTACGAGACTCAGCCTCAAAATCCACAAGGGATTTGGGATGTCC
TCATGGCACCGATTCGGGCTATGCTAGGTACTCATCCAGAGGAAGGTTCGCTCATTAAAGAAACGAGCGCAGCGATTGATGT
AGCCTTCTTCATCCTTATGGTTGGTGGTTTCCTTGGCATTGTCAACAAAACTGGTGCTCTTGACGTAGGGATTGCCTCTATCGT
GAAGAAGTATAAGGGCCGCGAAAAAATGTTAATTTTGGTACTGATGCCTTTGTTTGCCCTCGGTGGTACAACTTATGGTATGG
GTGAAGAAACAATGGCCTTCTATCCACTCCTTGTGCCAGTTATGATGGCCGTTGGTTTTGATAGCCTGACTGGTGTTGCAATT
ATTTTGCTCGGTTCTCAAATCGGCTGTTTGGCATCTACTCTGAATCCATTTGCGACAGGTATTGCTTCAGCGACTGCGGGAGTT
GGTACAGGGGACGGTATCGTACTTCGTCTGATCTTCTGGGTTACCTTGACTGCTCTTAGTACTTGGTTTGTTTACCGTTATGCG
GATAAGATTCAAAAAGATCCGACTAAGTCACTGGTTTATAGTACTCGCAAAGAAGATTTGAAACACTTTAACGTAGAAGAAT
CTTCATCTGTAGAATCTACACTTAGCAGCAAACAAAAATCAGTTCTCTTCTTATTTGTGTTGACATTCATCTTGATGGTATTGA
GCTTCATTCCATGGACAGACCTTGGCGTTACCATTTTTGATGACTTTAATACTTGGTTGACTGGTCTTCCAGTTATTGGTAATA
TTGTCGGTTCATCTACTTCTGCACTAGGTACTTGGTACTTCCCAGAAGGCGCAATGCTCTTTGCCTTTATGGGTATCCTGATTG
GTGTTATTTATGGTCTTAAAGAAGATAAGATTATCTCTTCCTTCATGAATGGTGCTGCTGACTTGCTCAGTGTTGCCTTGATCG
TAGCGATTGCTCGTGGTATTCAAGTTATCATGAACGACGGTATGATTACCGATACAATCCTCAACTGGGGTAAAGAAGGCTT

GAGCGGTCTATCTTCACAAGTCTTTATCGTTGTAACTTATATCTTCTATCTACCTATGTCATTCTTGATCCCATCTTCATCTGGT
CTTGCCAGCGCAACTATGGGTATCATGGC
TCCACTTGGAGAATTTGTAAATGTCCGTCCTAGCTTGATTATCACTGCTTACCAATCTGCTTCAGGTGTCTTGAACTTGATTGC
ACCAACATCTGGTATTGTGATGGGAGCTCTTGCACTTGGACGTATCAACATTGGTACTTGGTGGAAATTCATGGGCAAACTCG
TAGTCGCTATTATTGTAGTGACCATCGCCCTTCTTCTCCTTGGAACCTTCCTTCCATTCCTATAA

4166.3 (SEQ. ID. NO. 286)
ATGAAAATAGATATAACAAATCAAGTTAAAGATGAATTTCTTATATCATTAAAAACCTTGATTTCCTATCCTTCAGTACTCAA
TGAAGGAGAAAATGGAACACCTTTTGGACAAGCAATCCAAGATGTCCTAGAAAAAACTTTAGAGATTTGTCGAGACATAGG
TTTCACTACCTATCTTGACCCTAAAGGTTATTACGGATATGCAGAAATCGGTCAGGGAGCAGAGCTTCTGGCCATTCTCTGTC
ATTTGGATGTTGTTCCATCAGGTGATGAAGCAGATTGGCAGACACCGCCATTTGAAGCAACTATCAAAGACGGCTGGGTATT
CGGACGTGGTGTCCAAGATGATAAAGGCCCTTCGCTCGCAGCTCTCTATGCAGTAAAAAGCTTGCTGGACCAAGGTATTCAG
TTCAAAAAGCGCGTACGCTTTATCTTTGGTACCGATGAGGAAACCCTCTGGCGCTGCATGGCACGCTACAATACCATCGAAG
AACAGGCCAGTATGGGCTTTGCACCTGACTCATCTTTTCCTCTGACCTATGCTGAAAAAGGGCTTCTACAGGTCAAACTTCAT
GGCCCTGGATCGGATCAACTAGAGCTTGAAGTAGGAGGCGCCTTTAACGTTGTACCAGACAAGGCCAACTACCAAGGTCTCC
TCTATGAACAGGTTTGTAACGGTCTCAAAGAAGCTGGTTATGATTACCAAACCACTGAACAAACCGTAACGGTTCTCGGAGT
GCCAAAGCATGCTAAGGATGCTAGTCAAGGTATCAATGCTGTCATCCGACTAGCTACCATTCTTGCTCCTCTCCAAGAACACC
CTGCTCTCAGTTTTCTTGCAACACAAGCAGGTCAAGACGGCACAGGAAGACAAATCTTTGGTGATATAGCAGATGAACCTTC
TGGTCACCTATCCTTTAATGTCGCAGGTCTCATGATCAATCATGAACGTTCTGAAATCCGTATTGACATTCGGACTCCTGTCTT
AGCTGACAAGGAAGAACTAGTAGAGTTGCTTACAAGATGTGCACAAAACTACCAACTCCGCTACGAAGAGTTTGACTATCTA
GCGCCTCTATACGTCGCAGAAGACAGTAAACTCGTTAGCACACTGATGCAAATCTACCAAGAAAAGACTGGCGATAACAGTC
CTGCTATTTCATCCGGTGGTGCCACTTTTGCTCGCACCATGCCAAATTGTGTAGCCTTCGGCGCCTTATTCCCAGGAGCGAAG
CAGACAGAACATCAGGCAAATGAATGTGCCGTTCTAGAAGATTTGTACCGTGCTATGGATATTTATGCCGAAGCCGTCTATC
GACTTGCAACTTAA

4169.1 (SEQ. ID. NO. 287)
ATGTCTAATTCATTTGTCAAGTTGTTAGTCTCTCAATTATTTGCAAATTTAGCAGATATTTTCTTTAGAGTAACAATCATTGCT
AACATATACATTATTTCAAAATCAGTAATTGCCACATCACTAGTTCCTATCTTAATAGGAATATCCTCTTTTGTTGCGAGTCTT
TTAGTTCCGTTGGTTACTAAAAGGTTAGCGCTAAATAGGGTTTTATCTTTATCTCAATTTGGAAAGACTATATTATTGGCGAT
ACTGGTAGGAATGTTTACCGTAATGCAATCCGTAGCGCCTTTGGTGACCTATCTATTTGTTGTTGCAATTTCCATACTAGATG
GTTTTGCAGCACCCGTTTCCTATGCTATTGTGCCACGCTATGCGACCGATTTGGGTAAGGCTAATTCAGCCTTATCAATGACT
GGTGAAGCTGTTCAATTGATAGGTTGGGGATTAGGTGGACTCTTGTTTGCAACAATTGGTCTGTTACCTACCACGTGTATCAA
TTTAGTCTTGTATATCATTTCTAGCTTTCTGATGTTATTTCTTCCTAACGCTGAAGTGGAGGTGTTAGAGTCAGAAACTAATCT
TGAAATTTTGCTCAAAGGTTGGAAGTTAGTTGCTAGAAATCCTAGATTAAGACTTTTTGTATCAGCAAATTTATTGGAAATTT
TTTCAAATACGATTTGGGTTTCTTCCATTATACTTGTTTTTGTAACGGAGTTATTAAATAAAACGGAAAGTTACTGGGGATATT
CTAATACAGCATACTCTATTGGTATTATAATTAGTGGCTTAATTGCTTTTAGGCTATCTGAAAAGTTCCTTGCTGCTAAATGGG
AACCCCAATTATTCACCCCAAATCTAAAAACCATCCAGAATCCTTGCCTTAGCTTAGATCCTGGATGGTTTCTTTTTTCACCCA
ATGGGTGTTTTTTACTAGACAAAAAAGAGTTTCCCCTTTATGGTATAAGTGTAGAAAAAAACACAAAAAGAAAGGAAACTCA
CATGAACAGTTTACCAAATCATCACTTCCAAAACAAGTCTTTTTACCAACTATCTTTCGATGGAGGTCATTTAACCCAGTATG
GTGGTCTTATCTTTTTTCAGGAACTTTTTTCCCAGTTGAAACTAAAAGAGCGGATTTCTAAGTATTTAGTAACGAATGACCAA
CGCCGCTACTGTCGTTATTCGGATTCAGATATCCTTGTCCAGTTCCTCTTTCAACTGTTAACAGGTTATGGAACGGACTATGCT
TGTAAAGAATTGTCAGCTGATGCCTACTT
TCCAAAATTGTTGGAAGGAGGGCAGCTTGCTTCACAGCCAACCTTATCCCGTTTTCTTTCCAGAACTGACGAGGAAACAGTCC
ATAGTTTGCGATGCCTCAACCTTGAATTGGTCGAATTCTTTTTACAGTTTCACCAGCTAAACCAACTCATTGTAGATATCGATT
CTACCCATTTCACAACTTATGGCAAGCAAGAAGGTGTTGCTTATAACGCCCACTATCGTGCTCATGGCTATCATCCTCTTTAT
GCTTTCGAGGGGAAGACAGGTTATTGTTTCAATGCCCAGCTTCGTCCTGGTAATCGTTATTGTTCTGAAGAGGCAGACAGCTT
TATCACACCTGTTTTAGAACGGTTTAATCAACTTCTCTTTCGAATGGATAGTGGCTTTGCGACCCCAAAATTATACGATTTAAT
TGAAAAAACAGGGCAATACTACCTCATAAAACTCAAGAAAAATACTGTTCTGAGCCGTCTTGGAGACCTTTCCCTCCCTTGC
CCACAGGATGAGGACTTAACCATCTTGCCCCACTCCGCCTACTCAGAAACTCTCTATCAAGCAGGATCTTGGTCGCACAAGC
GTCGTGTCTGCCAGTTCTCTGAACGAAAAGAAGGAAACTTGTTCTACGATGTTATTTCTCTCGTTACAAATATGACGAGTGGA
ACAAGCCAAGACCAGTTTCAGCTTTATCGTGGACGTGGTCAAGCCGAGAATTTCATCAAGGAGATGAAGGAGGGATTTTTTG
GCGATAAAACGGATAGTTCAACCTTAATCAAAAACGAAGTTCGTATGATGATGAGCTGTATCGCCTACAATCTCTATCTTTTT
CTCAAACATCTAGCTGGAGGTGACTTCCAAACTTTAACAATCAAACGCTTCCGCCATCTTTTTCTTCACGTGGTGGGAAAATG
TGTTCGAACAGGACGCAAGCAGCTCCTCAAATTGTCTAGTCTCTATGCCTATTCCGAATTGTTTTCAGCACTTTATTCTAGGAT
TAGAAAAGTCAACCTGAATCTTCCTGTTCCTTATGAACCACCTAGAAGAAAAGCGTCGTTAATGATGCATTAA

4169.3 (SEQ. ID. NO. 288)
ATGATGGAGTTTTTTCAACAGCTTCCTCATTTAGAGCCATATGGCAATCCTCAGTATTTTGTTTATGTGATTGCTGCAACCTTG
CCCATCTTTATAGGTCTCTTTTTCAAGAAACGCTTTGCCTGGTATGAAGTGTTGGTAAGTCTCTTCTTTATTGTCACCATGTTG
GTGGGTGGAAAGACCAATCAACTAGCTGCCTTGGGTATTTACCTTTGCTGGGAAATATTGCTCCTGCTTTTCTACAAGCATTA
TCGAAAAAGCAAGGATGGCAAGTGGGTCTTCTACTTAGTTAGTTTTCTGTCCCTACTTCCGATTATCTTTGTCAAGGTGCAAC
CAGCTATCAATGGAACGCAGTCTTTGCTTGGGTTCTTGGGAATTTCTTACCTGACCTTTCGTTCGGTTGGAATTGTCATCGAGC
TGAGAGATGGAGTGATTAAGGATTTTACCCTCTGGGAATTCCTCCGTTTCCTTCTCTTCATGCCAACTTTCTCGAGTGGTCCAA
TCGATCGCTTTAAGCGATTTAATGAAAATTATCAGGCTATTCCTGAGCGAGATGAGTTGATGGATATGCTGGATGAATCTGTC
CGCTATATCATGTGGGGCTTTTTGTATAAGTTTATCCTAGCTCATGTTTTAGGAGAGACCTTACTACCTCCTCTGAAGAATTTA
GCCTTGCAGTCAGGTGGCTTCTTTAATCTCTATGCCTTGGCAGTTATGTATACTTTTGGTCTGGAACTCTTCTTTGACTTTGCA
GGTTATTCTATGTTTGCTTTGGCCATCTCAAACTTGATGGGAATCCGTAGCCCTATCAACTTTAACAAGCCCTTTTTATCAAGG
GATTTAAAGGAGTTTTGGAATCGCTGGCATATGAGTCTGTCCTTCTGGTTCCGTGACTTTGTCTTTATGCGAATGGTGATGGT
GTTAACCAGAAAGAAAGTCTTTAAAAATCGTAATGTAACCTCAAGCATGGCCTACATTGTAAATATGCTGATTATGGGATTTT
GGCATGGTGTGACCTGGTACTATATCGCCTATGGACTCTTTCATGGACTAGGCTTGGTCATCAATGATGCCTGGGTTCGCAAG
AAAAAAACGCTCAATAAGGAACGGAAAAAAGCAGGGAAGGCTGCCCTACCTGAGAATCGCTGGATTCAGTTGCTTGGCATG
GTTGTCACTTTCCATGTTGTCATGTTGTCATTCTTAATCTTTTCTGGATTCTTGAATAATCTATGGTTTAAAAAATAA

4169.4 (SEQ. ID. NO. 289)

ATGCTTAAACGCTTATGGATGATCTTCGGACCGGTCTTGATCGCTGGTTTGTTGGTTTTTCTGCTCATTTTCTTTTATCCTACTG
AGATGCATCATAATCTAGGAGCTGAAAAGCGTTCAGCAGTGGCTACTACTATCGATAGTTTTAAGGAGCGAAGTCAAAAAGT
CAGAGCACTATCTGATCCAAATGTGCGTTTTGTTCCCTTCTTTGGCTCTAGTGAATGGCTTCGTTTTGACGGTGCTCATCCTGC
GGTATTAGCTGAGAAATACAATCGTTCCTACCGTCCTTATCTTTTAGGACAGGGGGGAGCTGCATCGCTTAACCAATATTTTG
GAATGCAACAGATGTTACCACAGCTGGAGAATAAACAAGTTGTGTATGTTATCTCACCTCAGTGGTTCAGTAAAAATGGCTA
TGATCCAGCAGCCTTCCAGCAGTATTTTAATGGAGACCAGTTGACTAGTTTTCTGAAACATCAATCTGGGGATCAGGCTAGTC
AATATGCAGCGACTCGCTTACTGCAACAGTTCCCAAACGTAGCTATGAAGGACCTGGTTCAGAAGTTGGCAAGTAAAGAAGA
ATTGTCGACAGCAGACAATGAAATGATTGAATTATTGGCTCGTTTTAATGAACGCCAAGCTTCCTTTTTTGGTCAGTTTTCGG
TTAGAGGCTATGTTAACTACGATAAGCATGTAGCTAAGTATTTAAAAATCTTGCCAGACCAGTTTTCTTATCAGGCAATAGAA
GATGTTGTCAAAGCAGATGCTGAAAAAAATACTTCCAATAATGAGATGGGAATGGAAAATTATTTCTATAATGAGCAGATCA
AGAAGGATTTGAAGAAATTAAAGGATTCTCAGAAAAGCTTTACCTATCTCAAGTCGCCAGAGTATAATGACTTGCAGTTGGT
TTTAACACAGTTTTCTAAATCTAAGGTAAACCCGATTTTTATCATTCCACCTGTTAATAAAAAATGGATGAACTATGCTGGTC
TACGAGAGGATATGTACCAACAAACGGTGCAGAAGATTCGCTACCAGTTAGAAAGTCAAGGTTTTACCAATATAGCAGATTT
TTCTAAGGACGGCGGGGAGCCTTTCTTTATGAAGGACACCATTCACCTTGGTTGGTTGGGTTGGTTGGCTTTTGACAAGGCAG
TTGATCCTTTCCTATCCAATCCCACACCAGCTCCGACTTACCATCTGAATGAGCGCTTTTTCAGCAAAGATTGGGCGACTTAT
GATGGAGATGTCAAAGAATTTCAATAG

4169.6 (SEQ. ID. NO. 290)
ATGGAGAAAAACCTCAAGGCTTTGAAACAAACAACAGACCAAGAAGGCCCAGCAATTGAACCTGAAAAGGCAGAGGATAC
CAAGACAGTCCAAAATGGTTACTTCGAGGATGCAGCTGTCAAGGACCGCACCTTGAGTGACTATGCAGGTAACTGGCAATCA
GTTTATCCTTTCCTTGAAGACGGCACGTTTGACCAAGTCTTTGACTACAAGGCTAAGTTGACTGGTAAGATGACCCAGGCTGA
GTACAAGGCTTACTATACAAAAGGCTATCATACAGATGTGACTAAGATTAACATTACTGATAATACTATGGAATTTGTTCAA
GGTGGACAAAGCAAGAAATACACTTACAAGTATGTCGGTAAGAAAATTTTGACTTACAAGAAAGGCAATCGTGGCGTGCGT
TTCCTCTTTGAAGCCACAGATGCTGACGCTGGACAATTCAAGTATGTTCAGTTTAGTGACCACAATGTTGCCCCAGTTAAGGC
AGAACATTTCCATATCTTCTTTGGAGGCACAAGCCAAGAAGCCCTCTTTGAAGAAATGGACAACTGGCCAACCTACTACCCA
GATAACCTATCTGGCCAAGAAATCGCCCAAGAAATGTTGGCGCATTGA

4170.3 (SEQ. ID. NO. 291)
ATGAAAGATGGTCATTTGCTAGCCCATCATATTCGTTTGTTGAATGGGCGGATTTTTCAAAAGTTACTGAGTCAAGATCCTGA
GGCTCTTTATAGGGGTGAACAGGGCAAGATTTTAGCGGTTTTATGGAATAGTGAAACTGGCTGCGCAACTGCGACAGATATC
GCGCTTGCGACTGGACTTGCGAATAATACGCTGACGACTATGATAAAAAAGCTAGAGGAACAAAAGCTTGTAATTGTTAGTC
CGTGTGGAAAAGACAAGCGTAAGAAGTATTTAGTTTTAACGGAGTTAGGCAAGTCCCAGAAAGAAGTGGGGCATCGTGTCA
GTCAGAAATTGGATACTATCTTTTACAAAGGATTTTCAGAGGAAGAAATTCACCAATTTGAAGGTTTTCAAGAAAGAATTTT
GGCGAATCTGAAAGAGAAGGGAAATGAGGTTTAG

4170.4 (SEQ. ID. NO. 292)
ATGACTAATTTAATTGCAACTTTTCAGGATCGTTTTAGTGATTGGTTGACAGCTCTATCTCAACATTTGCAGTTGTCGCTTTTG
ACCTTGTTACTAGCTATTTTGCTTGCGATTCCCTTGGCTGTTTTTCTTCGCTATCATGAGAAGCTGGCCGACTGGGTCTTGCAG
ATTGCAGGTATTTTCCAGACCATCCCGTCTCTGGCCTTGTTGGGGCTCTTTATCCCTTTGATGGGAATTGGGACCTTGCCGGCT
TTGACAGCTCTAGTGATTTATGCGATTTTCCCTATTTTGCAAAATACTATCACTGGGCTGAAGGGAATTGATCCGAACCTGCA
AGAGGCTGGGATTGCCTTTGGGATGACCAGATGGGAACGTCTCAAGAAATTTGAAATTCCACTCGCCATGCCTGTTATCATG
TCTGGGATTCGGACGGCAGCTGTTTTGATTATCGGTACGGCAACCTTGGCGGCCTTGATTGGTGCAGGGGGACTAGGTTCCTT
TATTCTTTTGGGAATTGACCGTAATAATGCCAGTTTGATTTTGATTGGGGCACTTTCTTCTGCAGTGCTAGCCATTGCCTTTAA
CTTCCTACTAAAAGTGATGGAAAAAGCAAAATTACGGACGATTTTCTCAGGTTTTGCCTTGGTGGCTTTATTACTGGGTCTGT
CTTATAGTCCAGCTCTTTTGGTTCAAAAAGAGAAGGAAAACTTGGTTATTGCTGGGAAAATAGGTCCAGAACCAGAAATTTT
GGCCAATATGTATAAGTTGCTGATTGAAGAAAATACCAGCATGACTGCGACTGTTAAACCGAATTTTGGGAAGACAAGCTTC
CTTTATGAAGCTCTGAAAAAAGGCGATATTGACATCTATCCTGAATTTACTGGTACGGTGACTGAAAGTTTGCTTCAACCATC
ACCCAAGGTGAGTCATGAACCAGAACAGGTTTATCAGGTGGCGCGTGATGGCATTGCTAAGCAGGATCATCTAGCCTATCTC
AAACCCATGTCTTATCAAAACACCTATGCTGTAGCTGTTCCGAAAAAGATTGCTCAAGAATATGGCTTGAAGACCATTTCAG
ACTTGAAAAAAGTGGAAGGGCAGTTGAAGGCAGGTTTTACACTCGAGTTTAACGACCGTGAAGATGGAAATAAGGGCTTGC
AATCAATGTATGGTCTCAATCTCAATGTAGCGACCATTGAGCCAGCCCTTCGCTATCAGGCTATTCAGTCAGGGGATATTCAA
ATCACGGATGCCTATTCGACTGATGCGGAATTGGAGCGTTATGATTTACAGGTCTTGGAAGATGACAAGCAACTCTTCCCAC
CTTATCAAGGGGCTCCACTCATGAAAGAAGCTCTTCTCAAGAAACACCCAGAGTTGGAAAGAGTTCTTAATACATTGGCTGG
TAAGATTACAGAAAGCCAGATGAGCCAGCTCAACTACCAAGTCGGTGTTGAAGGCAAGTCAGCAAAGCAAGTAGCCAAGGA
GTTTCTCCAAGAACAAGGTTTGTTGAAGAAATGA

4170.5 (SEQ. ID. NO. 293)
ATGATGCATACTTATTTGCAAAAGAAAATTGAAAATATCAAAACAACCCTAGGTGAAATGTCAGGTGGTTACCGTCGTATGG
TTGCGGCTATGGCTGATTTAGGATTTTCAGGAACTATGAAGGCTATCTGGGATGACCTCTTTGCCCATCGTAGTTTTGCCCAG
TGGATTTATTTGCTGGTTTTAGGAAGTTTTCCTCTCTGGCTGGAGTTGGTTTACGAACATCGTATTGTTGACTGGATTGGGATG
ATTTGTAGCTTGACAGGGATTATCTGTGTAATCTTTGTATCGGAAGGTCGAGCAAGTAATTATCTTTTTGGCTTGATTAACTCT
GTTATTTACCTTATTTTGGCCCTACAGAAAGGCTTTTATGGTGAGGTGCTGACGACACTTTACTTCACAGTCATGCAGCCAAT
TGGACTTCTAGTTTGGATTTATCAGGCACAGTTTAAGAAGGAAAAGCAGGAGTTTGTCGCGCGTAAACTGGACGGCAAGGGC
TGGACAAAGTATCTTTCCATTAGTGTGCTTTGGTGGTTGGCCTTTGGCTTCATTTATCAGTCTATTGGTGCCAATCGTCCCTAT
CGTGATTCAATCACAGATGCAACCAATGGGGTAGGGCAAATCCTCATGACAGCTGTTTACCGTGAACAGTGGATATTCTGGG
CGGCTACCAATGTCTTTTCAATCTATCTCTGGTGGGGAGAAAGCCTGCAAATTCAAGGGAAATATCTAATTTATCTCATTAAC
AGTCTAGTTGGTTGGTATCAATGGAGCAAGGCAGCTAAGCAGAATACTGATTTACTTAACTAG

4170.6 (SEQ. ID. NO. 294)
ATGAGAAATATGAAGGCAAAATATGCTGTTTGGGTGGCTTTTTTCTTAAATTTGACTTATGCCATTGTTGAGTTTATTGCAGG
TGGAGTATTTGGTTCTAGCGCTGTTCTTGCTGACTCTGTGCATGACTTGGGAGATGCGATTGCAATTGGAATATCAGCTTTTCT
AGAAACAATCTCCAATCGTGAAGAAGACAATCAGTACACCTTGGGCTATAAGCGGTTTAGCCTGCTAGGAGCCTTGGTAACA
GCTGTGATTCTCGTAACGGGCTCTGTTCTAGTCATTTTGGAAAATGTCACGAAGATTTTGCATCCGCAACCAGTCAATGATGA
GGGGATTCTCTGGTTAGGAATTATTGCGATTACTATCAATCTGTTAGCGAGTCTGGTGGTTGGTAAGGGAAAGACAAAGAAT
GAGTCTATTCTGAGTCTGCATTTTCTGGAAGATACGCTAGGGTGGGTAGCTGTTATCCTGATGGCGATTGTTCTTCGATTTAC

GGACTGGTATATCCTAGATCCTCTTTTGTCCCTTGTCATTTCTTTCTTTATTCTTTCAAAAGCCCTTCCACGTTTTTGGTCTACA
CTCAAGATTTTCTTGGATGCTGTGCCAGAAGGTCTTGATATCAAGCAAGTAAAGAGTGGCCTGGAGCGATTGGACAATGTGG
CCAGCCTTAATCAGCTTAATCTCTGGACTATGGATGCTTTGGAAAAAAATGCCATTGTCCATGTTTGTCTAAAAGAAATGGAA
CATATGGAAACTTGTAAAGAGTCTATTCGAATTTTCCTAAAAGATTGTGGTTTTCAAAATATTACCATTGAAATTGATGCTGA
CCTAGAAACTCACCAAACCCATAAGCGAAAGGTGTGTGACTTGGAACGGAGTTATGAGCATCAACATTAG

4170.8 (SEQ. ID. NO. 295)
ATGATTGAATACAAAAATGTAGCACTGCGCTACACAGAAAAGGATGTCTTGAGAGATGTCAACTTACAGATTGAGGATGGG
GAATTTATGGTTTTAGTAGGGCCTTCTGGGTCAGGTAAGACGACCATGCTCAAGATGATTAACCGTCTTTTGGAACCAACTGA
TGGAAATATTTATATGGATGGGAAGCGCATCAAAGACTATGATGAGCGTGAACTTCGTCTTTCTACTGGTTATGTTTTACAGG
CTATTGCTCTTTTTCCAAATCTAACAGTTGCGGAAAATATTGCTCTCATTCCTGAAATGAAGGGGTGGAGCAAGGAAGAAATT
ACGAAGAAAACAGAAGAGCTTTTGGCTAAGGTTGGTTTACCAGTAGCCGAGTATGGGCATCGCTTACCTAGTGAATTATCTG
GTGGAGAACAGCAACGGGTCGGTATTGTCCGAGCTATGATTGGTCAGCCCAAGATTTTCCTCATGGATGAACCCTTTTCGGCC
TTGGATGCTATTTCGAGAAAACAGTTGCAGGTTCTGACAAAAGAATTGCATAAAGAGTTTGGGATGACAACGATTTTTGTAA
CCCATGATACGGATGAAGCCTTGAAGTTGGCGGACCGTATTGCTGTCTTGCAGGATGGAGAAATTCGCCAGGTAGCGAATCC
CGAGACAATTTTAAAAGCGCCTGCAACAGACTTTGTAGCAGACTTGTTTGGAGGTAGTGTTCATGACTAA

4171.1 (SEQ. ID. NO. 296)
ATGTCAGCAGTTGCTATTTCAGCTATGACCAAGGTTATGCAAGAAACCCACGGAAATCCTTCTAGTATTCATGGTCATGGTCG
TCAAGCTGGCAAACTCTTGCGAGAAGCCCGTCAGGAACTAGCCCAGTTACTAAGGACAAAACCTCAACATATCTTTTTCACT
TCTGGTGGGACTGAAGGCAATAATACTACCATCATTGGCTACTGTCTTCGTCACCAAGAACAAGGAAAACATATCATCACAA
CTGCCATCGAGCACCATGCTGTCCTTGAAACAATTGATTACTTGGTTCAACACTTTGGGTTTGAAGCAACCATTATCCAGCCA
GAAAATCAAGAAATCACAGCCCAGCAAATTCAAAAGGCTTTACGTGACGATACGATTTTGGTTTCTACCATGTTTGTCAATA
ATGAGACAGGAAACCTACTGCCCATCGCTGAAATTGGCCAAATACTCAAGCAACACCCTGCTGCCTATCATGTTGATGCAGT
TCAGGCTATTGGTAAAATCCCAATTCATTCAGAAGAATTGGGCATTGATTTTCTCACTGCTTCTGCCCACAAATTCCATGGTC
CTAAGGGAATCGGTTTTCTCTACGCATCTAGCATGGACTTTGATTCCTATCTACATGGCGGAGACCAGGAACAGAAAAAACG
TGCAGGAACTGAAAATCTGCCTGCCATTGTAGGCATGGTTGCAGCCCTAAAAGAAGACCTAGAAAAACAAGAAGAACATTT
TCAACATGTACAAAATCTAGAAACTGCCTTTCTGGCAGAGCTGGAGGGCATTCAGTATTACCTGAATAGAGGAAAACATCAT
CTCCCTTATGTTCTCAATATTGGATTTCCTGGTCAGAAAAATGACCTCTTACTCCTTCGGCTAGATTTAGCTGGAATTTCAATC
TCTACTGGCTCAGCCTGTACTGCAGGCGTTGTCCAATCCAGCCATGTTCTTGAAGCCATGTATGGCGCAAATTCAGAACGCTT
GAAGGAATCCCTTCGCATCAGTTTGTCGCCACAAAATACCGTTGAAGACCTACAAACCCTCGCAAAAACCTTAAAAGAAATT
ATCGGAGGTTAG

4172.1 (SEQ. ID. NO. 297)
ATGTTATTCAAATTATCTAAGGAAAAAATAGAGCTAGGCTTATCTCGTTTATCGCCAGCCCGTCGTATTTTTTTGAGTTTTGCC
TTGGTCATTTTACTAGGCTCTCTTCTTTTGAGCTTGCCCTTTGTCCAAGTTGAAAGCTCACGAGCGACTTATTTTGATCATCTTT
TCACTGCTGTCTCTGCAGTCTGTGTGACGGGTCTCTCAACCCTTCCAGTAGCTCACACCTATAATATCTGGGGTCAAATAATC
TGTTTGCTCTTGATTCAGATCGGTGGTCTAGGGCTCATGACCTTTATTGGGGTTTTCTATATCCAGAGCAAGCAAAAGCTTAG
TCTTCGTAGCCGTGCAACTATTCAGGATAGTTTTAGTTATGGAGAAACTCGATCTTTGAGAAAGTTTGTCTATTCTATTTTTCT
CACGACCTTTTTGGTTGAGAGCTTGGGAGCTATTTTGCTTAGTTTTCGCCTTATTCCTCAACTTGGCTGGGGACGTGGTCTTTT
TAGTTCCATTTTTCTAGCGATCTCAGCCTTCTGTAATGCCGGTTTTGATAATTTAGGGAGCACCAGTTTATTTGCTTTTCAGAC
CGATTTACTGGTCAATCTGGTGATTGCAGGCTTGATTATTACAGGCGGCCTTGGTTTTATGGTCTGGTTTGATTTGGCTGGTCA
TGTAGGAAGAAAGAAAAAAGGACGTCTGCACTTTCATACGAAGCTTGTACTATTATTGACTATAGGTTTGTTGTTATTTGGAA
CAGCAACTACTCTCTTTCTTGAGTGGAACAATGCTGGAACGATTGGCAATCTCCCTGTTGCCGATAAGGTTTTAGTTAGCTTT
TTTCAAACAGTGACGATGCGAACAGCTGGCTTTTCTACGATAGATTATACTCAGGCTCATCCTGTGACTCTTTTGATTTATATC
TTACAGATGTTTCTAGGTGGGGCACCTGGAGGAACAGCTGGGGGACTCAAGATTACGACATTTTTTGTCCTCTTGGTCTTTGC
ACGAAGTGAGCTTCTAGGCTTGCCTCATGCCAATGTTGCGAGACGAACGATCGCGCCGCGAACGGTTCAAAAATCCTTTAGT
GTCTTTATTATCTTTTTGATGAGCTTCTTGATAGGATTGATTCTGCTAGGGATAACAGCCAAAGGCAATCCTCCCTTTATCCAC
CTCGTATTTGAAACCATTTCAGCTCTTAGTACAGTTGGTGTAACGGCAAATCTGACTCCTGACCTTGGGAAATTGGCTCTCAG
TGTTATCATGCCACTTATGTTTATGGG
ACGAATTGGTCCCTTGACCTTGTTTGTTAGCTTGGCAGATTACCATCCAGAAAAGAAAGATATGATTCACTATATGAAAGCA
GATATTAGTATTGGTTAA

4172.2 (SEQ. ID. NO. 298)
ATGTCAGATCGTACGATTGGAATTTTGGGCTTGGGAATTTTTGGGAGCAGTGTCCTAGCTGCCCTAGCCAAGCAGGATATGA
ATATTATCGCTATTGATGACCACGCAGAGCGCATCAATCAGTTTGAGCCAGTTTTGGCGCGTGGAGTGATTGGTGACATCAC
AGATGAAGAATTATTGAGATCAGCAGGGATTGATACCTGCGATACCGTTGTAGTCGCGACAGGTGAAAATCTGGAGTCGAGT
GTGCTTGCGGTTATGCACTGTAAGAGTTTGGGGGTACCGACTGTTATTGCTAAGGTCAAAAGTCAGACCGCTAAGAAAGTGC
TAGAAAAGATTGGAGCTGACTCGGTTATCTCGCCAGAGTATGAAATGGGGCAGTCTCTAGCACAGACCATTCTTTTCCATAA
TAGTGTTGATGTCTTTCAGTTGGATAAAAATGTGTCTATCGTGGAGATGAAAATTCCTCAGTCTTGGGCAGGTCAAAGTCTGA
GTAAATTAGACCTCCGTGGCAAATACAATCTGAATATTTTGGGTTTCCGAGAGCAGGAAAATTCCCCATTGGATGTTGAATTT
GGACCAGATGACCTCTTGAAAGCAGATACCTATATTTTGGCAGTCATCAACAACCAGTATTTGGATACCCTAGTAGCATTGA
ATTCGTAA

4172.3 (SEQ. ID. NO. 299)
ATGAAGTTATTGTCTATCGCAATTTCTAGCTATAATGCAGCAGCCTATCTTCATTACTGTGTGGAGTCGCTAGTGATTGGTGG
TGAGCAAGTTGGGATTTTGATTATCAATGACGGGTCTCAGGATCAGACTCAGGAAATCGCTGAGTGTTTAGCTAGCAAGTAT
CCTAATATCGTTAGAGCCATCTATCAGGAAAATAAATGCCATGGCGGTGCGGTCAATCGTGGCTTGGTAGAGGCTTCTGGGC
GCTATTTTAAAGTAGTTGACAGTGATGACTGGGTGGATCCTCGTGCCTACTTGAAAATTCTTGAAACCTTGCAGGAACTTGAG
AGCAAAGGTCAAGAGGTGGATGTCTTTGTGACCAATTTTGTCTATGAAAAGGAAGGGCAGTCTCGTAAGAAGAGTATGAGTT
ACGATTCAGTCTTGCCTGTTCGGCAGATTTTTGGCTGGGACCAGGTCGGAAATTTCTCCAAAGGCCAGTATACCATGATGCAC
TCGCTGATTTATCGGACAGATTTGTTGCGTGCTAGCCAGTTCTAA

4172.4 (SEQ. ID. NO. 300)
ATGAAATTCAATCCAAATCAAAGATATACTCGTTGGTCTATTCGCCGTCTCAGTGTCGGTGTTGCCTCAGTTGTTGTGGCTAG
TGGCTTCTTTGTCCTAGTTGGTCAGCCAAGTTCTGTACGTGCCGATGGGCTCAATCCAACCCCAGGTCAAGTCTTACCTGAAG
AGACATCGGGAACGAAAGAGGGTGACTTATCAGAAAAACCAGGAGACACCGTTCTCACTCAAGCGAAACCTGAGGGCGTTA
CTGGAAATACGAATTCACTTCCGACACCTACAGAAAGAACTGAAGTGAGCGAGGAAACAAGCCCTTCTAGTCTGGATACACT
TTTTGAAAAAGATGAAGAAGCTCAAAAAAATCCAGAGCTAACAGATGTCTTAAAAGAAACTGTAGATACAGCTGATGTGGA
TGGGACACAAGCAAGTCCAGCAGAAACTACTCCTGAACAAGTAAAAGGTGGAGTGAAAGAAAATACAAAAGACAGCATCG
ATGTTCCTGCTGCTTATCTTGAAAAAGCTGAAGGGAAAGGTCCTTTCACTGCCGGTGTAAACCAAGTAATTCCTTATGAACTA
TTCGCTGGTGATGGTATGTTAACTCGTCTATTACTAAAAGCTTCGGATAATGCTCCTTGGTCTGACAATGGTACTGCTAAAAA
TCCTGCTTTACCTCCTCTTGAAGGATTAACAAAAGGGAAATACTTCTATGAAGTAGACTTAAATGGCAATACTGTTGGTAAAC
AAGGTCAAGCTTTAATTGATCAACTTCGCGCTAATGGTACTCAAACTTATAAAGCTACTGTTAAAGTTTACGGAAATAAAGA
CGGTAAAGCTGACTTGACTAATCTAGTTGCTACTAAAAATGTAGACATCAACATCAATGGATTAGTTGCTAAAGAAACAGTT
CAAAAAGCCGTTGCAGACAACGTTAAAGACAGTATCGATGTTCCAGCAGCCTACCTAGAAAAAGCCAAGGGTGAAGGTCCA
TTCACAGCAGGTGTCAACCATGTGATTCCATACGAACTCTTCGCAGGTGATGGCATGTTGACTCGTCTCTTGCTCAAGGCATC
TGACAAGGCACCATGGTCAGATAACGGCGACGCTAAAAACCCAGCCCTATCTCCACTAGGCGAAAACGTGAAGACCAAAGG
TCAATACTTCTATCAAGTAGCCTTGGACGGAAATGTAGCTGGCAAAGAAAAACAAGCGCTCATTGACCAGTTCCGAGCAAAT
GGTACTCAAACTTACAGCGCTACAGTCAATGTCTATGGTAACAAAGACGGTAAACCAGACTTGGACAACATCGTAGCAACTA
AAAAAGTCACTATTAACATAAACGGTTTAATTTCTAAAGAAACAGTTCAAAAAGCCGTTGCAGACAACGTTAAAGACAGTAT
CGATGTTCCAGCAGCCTACCTAGAAAAAGCCAAGGGTGAAGGTCCATTCACAGCAGGTGTCAACCATGTGATTCCATACGAA
CTCTTCGCAGGTGATGGTATGTTGACTCGTCTCTTGCTCAAGGCATCTGACAAGGCACCATGGTCAGATAACGGTGACGCTAA
AAACCCAGCCCTATCTCCACTAGGTGAAAACGTGAAGACCAAAGGTCAATACTTCTATCAATTAGCCTTGGACGGAAATGTA
GCTGGCAAAGAAAAACAAGCGCTCATTGACCAGTTCCGAGCAAACGGTACTCAAACTTACAGCGCTACAGTCAATGTCTATG
GTAACAAAGACGGTAAACCAGACTTGGACAACATCGTAGCAACTAAAAAAGTCACTATTAACATAAACGGTTTAATTTCTAA
AGAAACAGTTCAAAAAGCCGTTGCAGACAACGTTAAGACAGTATCGATGTTCCAGCAGCCTACCTAG

4172.5 (SEQ. ID. NO. 301)
ATGAAACTAAAAAGTTATATTTTGGTTGGATATATTATTTCAACCCTCTTAACCATTTTGGTTGTTTTTTGGGCTGTTCAAAAA
ATGCTGATTGCGAAAGGCGAGATTTACTTTTTGCTTGGGATGACCATCGTTGCCAGCCTTGTCGGTGCTGGGATTAGTCTCTT
TCTCCTATTGCCAGTCTTTACGTCGTTGGGCAAACTCAAGGAGCATGCCAAGCGGGTAGCGGCCAAGGATTTTCCTTCAAATT
TGGAGGTTCAAGGTCCTGTAGAATTTCAGCAATTAGGGCAAACTTTTAATGAGATGTCCCATGATTTGCAGGTAAGCTTTGAT
TCCTTGGAAGAAAGCGAACGAGAAAAGGGCTTGATGATTGCCCAGTTGTCGCATGATATTAAGACTCCTATCACTTCGATCC
AAGCGACGGTAGAAGGGATTTTGGATGGGATTATCAAGGAGTCGGAGCAAGCTCATTATCTAGCAACCATTGGACGCCAGA
CGGAGAGGCTCAATAAACTGGTTGAGGAGTTGAATTTTTTGACCCTAAACACAGCTAGAAATCAGGTGGAAACTACCAGTAA
AGACAGTATTTTTCTGGACAAGCTCTTAATTGAGTGCATGAGTGAATTTCAGTTTTTGATTGAGCAGGAGAGAAGAGATGTCC
ACTTGCAGGTAATCCCAGAGTCTGCCCGGATTGAGGGAGATTATGCTAAGCTTTCTCGTATCTTGGTGAATCTGGTCGATAAC
GCTTTTAAATATTCTGCTCCAGGAACCAAGCTGGAAGTGGTGGCTAAGCTGGAGAAGGACCAGCTTTCAATCAGTGTGACCG
ATGAAGGGCAGGGTATTGCCCCAGAGGATTTGGAAAATATTTTCAAACGCCTTTATCGTGTCGAAACTTCGCGTAACATGAA
GACAGGTGGTCATGGATTAGGACTTGCGATTGCGCGTGAATTGGCCCATCAATTGGGTGGGGAAATCACAGTCAGCAGCCAG
TACGGTCTAGGAAGTACCTTTACCCTCGTTCTCAACCTCTCTGGTAGTGAAAATAAAGCCTAA

4172.6 (SEQ. ID. NO. 302)
ATGTTTGGTCAAACGGCTCAACATGGTCTTACGAATAGCCTGAAAGACTTCTGGATTTTTCTGCTGAATATAGGTCCACAATT
GGCGTTTTTTTGCCAGATGCTCCGCTGTTCCAGATCGGTTGAGCAGGGTACTGGAAATCACCGTCGTGAGTTCAATATGATTC
AGCAGATATTCTCGCATTTTGGGATGACTCACTTGGGACAAATCAAGTTGGTCTATCAAGAGTCGATTGACCTTGAGTTGCTG
GTCAATGCACTTAATCATCACTTGCTCATTGACAGACTGGTCCTCACGCCCAATCAAATAACGATAGAAATCGACAGGCAGA
TAGTACATGGTCTTGACCTGCTGAAGGGGCGTAAAGACAAAGAGATTATCGACATAAAAAGTATGTTCAGGCAGTTAGAACT
GGCTAGCACGCAACAAATCTGTCCGATAAATCAGCGAGTGCATCATGGTATACTGGCCTTTGGAGAAATTTCCGACCTGGTC
CCAGCCAAAAATCTGCCGAACAGGCAAGACTGA

4174.1 (SEQ. ID. NO. 303)
ATGGAACATTTAGCAACTTATTTTTCAACCTATGGAGGAGCTTTCTTCGCTGCATTGGGAATTGTATTGGCGGTTGGATTAAG
CGGTATGGGGTCTGCTTATGGAGTTGGTAAGGCTGGGCAATCTGCCGCAGCTTTACTGAAAGAACAGCCTGAAAAGTTTGCC
TCAGCTTTGATATTGCAATTATTGCCCGGAACACAAGGATTATATGGTTTTGTTATTGGAATTTTAATTTGGTTGCAATTAACT
CCAGAACTTCCTTTAGAAAAAGGCGTTGCTTATTTCTTTGTAGCTCTTCCAATTGCTATTGTAGGATACTTTTCAGCTAAGCAT
CAAGGAAATGTAGCAGTAGCGGGAATGCAAATCTTGGCTAAAAGACCAAAAGAATTCATGAAGGGAGCAATTTTAGCTGCC
ATGGTAGAAACCTATGCAATTCTTGCTTTTGTCGTATCATTCATTTTGACCCTTCGTGTATAA

4175.2 (SEQ. ID. NO. 304)
ATGTTAAAATCAGAAAAACAATCACGTTATCAAATGTTAAATGAAGAATTGTCCTTCCTATTGGAAGGCGAAACCAATGTTT
TGGCTAATCTTTCCAACGCCAGTGCTCTCATAAAATCACGTTTTCCTAATACCGTATTTGCAGGCTTTTATTTGTTCGATGGAA
AGGAATTGGTTTTAGGCCCCTTCCAAGGAGGTGTTTCCTGCATCCGTATTGCACTAGGCAAGGGTGTTTGTGGTGAGGCAGCT
CACTTTCAGGAAACTGTTATTGTTGGAGATGTGACGACCTATCTCAACTATATTTCTTGTGATAGTCTAGCTAAAAGTGAAAT
TGTGGTGCCGATGATGAAGAATGGTCAGTTACTTGGAGTTCTGGATCTGGATTCTTCAGAGATTGAGGATTACGATGCTATGG
ATCGAGATTATTTGGAACAATTTGTCGCTATTTTGCTTGAAAAGACAGCATGGGACTTTACGATGTTTGAGGAAAAATCTTAA

4175.3 (SEQ. ID. NO. 305)
ATGTCAGTATTAGAGATCAAAGATCTTCACGTTGAGATTGAAGGAAAAGAAATTTTAAAAGGGGTTAACCTGACCCTGAAAA
CAGGAGAAATTGCCGCTATCATGGGACCAAATGGTACAGGTAAATCGACTCTTTCTGCCGCTATCATGGGAAATCCAAACTA
TGAAGTAACTAAAGGTGAAGTTTTGTTTGATGGCGTAAACATCCTTGAGTTGGAAGTGGATGAGCGTGCGCGTATGGGACTT
TTCCTTGCTATGCAATACCCATCAGAAATCCCTGGAATTACCAATGCTGAGTTTCTTCGTGCCGCTATGAATGCGGGTAAAGA
AGATGATGAGAAGATTTCAGTTCGTGAGTTTATTACTAAGCTAGATGAAAAAATGGAATTGCTCAACATGAAAGAAGAAATG
GCAGAGCGTTACCTCAACGAAGGCTTCTCTGGTGGTGAGAAAAAACGCAATGAAATTCTTCAACTTTTGATGTTGGAGCCAA
CATTTGCTCTTTTGGACGAGATTGACTCAGGTCTTGATATTGACGCTCTTAAAGTTGTGTCTAAAGGTGTCAATGCCATGCGT
GGTGAAGGTTTTGGTGCTATGATCATCACTCACTACCAACGTCTTTTGAACTATATCACACCTGATGTGGTACACGTGATGAT

GGAAGGTCGTGTTGTCCTTTCTGGTGGTCCAGAATTGGCTGCGCGTTTGGAACGTGAAGGATACGCAAAATTAGCTGAAGAA
CTTGGCTACGACTACAAGGAAGAATTGTAA

4174.4 (SEQ. ID. NO. 306)
ATGCCCTACAAAAGACAAAGGAGTTTTTCAATGGCACTTTCTAAACTAGATAGCCTTTATATGGCAGTGGTAGCAGACCATT
CGAAAAATCCACATCACCAAGGGAAGTTAGAAGATGCTGAGCAAATCAGTCTCAACAATCCGACTTGTGGGGATGTCATCA
ACCTCTCTGTCAAGTTTGATGCAGAGGACCGTTTGGAAGATATTGCTTTTCTAAATTCAGGATGCACGATTTCAACTGCTTCT
GCTAGTATGATGACAGATGCCGTTTTAGGAAAAACCAAACAAGAAATTTTAGAACTGGCGACTATTTTTTCTGAAATGGTTC
AAGGGCAAAAAGATGAGCGTCAAGACCAACTTGGAGACGCGGCATTCTTGTCAGGTGTTGCCAAATTCCCTCAAAGAATCA
AGTGTGCAACCCTAGCTTGGAATGCCCTTAAGAAAACAATTGAAAATCAAGAAAAACAGTAA

4175.5 (SEQ. ID. NO. 307)
ATGAAAATTCAAGACCTATTGAGAAAAGATGTCATGTTGCTAGATTTGCAGGCAACTGAAAAAACAGCTGTCATCGACGAGA
TGATTAAAAATTTGACAGACCACGGTTATGTAACAGATTTTGAAACATTTAAAGAAGGAATTTTGGCGCGTGAAGCTTTGAC
TTCTACTGGTTTGGGTGATGGAATCGCAATGCCTCACAGCAAAAACGCTGCTGTCAAAGAAGCGACAGTTCTATTTGCTAAG
TCAAATAAGGGTGTTGACTACGAGAGCTTGGATGGACAAGCAACTGACCTCTTCTTCATGATTGCAGCTCCAGAAGGTGCCA
ATGATACTCACTTGGCAGCCTTGGCAGAATTGTCTCAATACTTGATGAAAGACGGTTTTGCAGACAAACTTCGTCAAGCAAC
ATCTGCAGACCAAGTTATCGAACTTTTTGACCAAGCTTCAGAAAAAACTGAGGAACTTGTTCAAGCACCTGCTAATGACTCT
GGTGACTTTATCGTAGCTGTTACAGCTTGTACAACAGGTATTGCCCACACTTACATGGCCCAAGAAGCCCTTCAAAAAGTAG
CTGCTGAAATGGGGGTTGGTATCAAGGTCGAAACCAACGGTGCTAGCGGTGTTGGAAATCAACTAACTGCAGAAGATATCCG
TAAGGCTAAAGCTATTATCATTGCAGCAGACAAGGCCGTTGAAATGGATCGATTTGATGGAAAACCATTGATCAATCGTCCA
GTTGCTGACGGTATCCGTAAGACAGAAGAGCTAATTAACTTGGCTCTTTCAGGAGATACTGAAGTCTACCGTGCCGCTAATG
GTGCCAAAGCTGCAACAGCCTCTAACGAAAAACAAAGCCTTGGTGGTGCCTTGTACAAACACTTGATGAGTGGTGTATCTCA
AATGTTACCATTCGTTATCGGTGGTGGTATCATGATTGCCCTTGCCTTCTTGATTGACGGTGCTTTGGGTGTTCCAAATGAAAA
CCTTGGCAATCTTGGTTCTTACCATGAGTTAGCTTCTATGTTCATGAAAATTGGTGGAGCTGCCTTTGGTTTGATGCTTCCAGT
CTTTGCGGGTTATGTTGCCTACTCTATTGCTGAAAAACCGGGTTTGGTAGCAGGTTTCGTGGCTGGTGCTATTGCCAAAGAAG
GTTTTGCCTTTGGTAAAATTCCTTATGCCGCAGGTGGTGAAGCAACTTCAACTCTTGCAGGTGTCTCATCTGGTTTCCTAGGTG
CCCTTGTTGGTGGATTTATCGCAGGTGCCTTGGTTCTTGCCATCAAGAAATACGTTAAAGTTCCTCGTTCACTCGAAGGTGCT
AAATCAATCCTTCTATTGCCACTTCTTGGAACAATCTTGACAGGATTTGTTATGCTAGCTGTGAATATCCCAATGGCTGCAAT
CAACACTGCTATGAATGACTTCCTAGGCGGTCTTGGAGGAGGTTCAGCTGTCCTTCTTGGTATCGTCCTTGGTGGAATGATGG
CTGTTGACATGGGTGGACCAGTTAATAAAGCAGCTTATGTCTTTGGTACAGGTACGCTTGCAGCAACTGTTTCTTCAGGTGGT
TCTGTAGCCATGGCAGCAGTTATGGCTGGAGGAATGGTGCCACCACTTGCAATCTTTGTCGCAACTCTTCTTTTCAAAGATAA
ATTTACTAAGGAAGAACGTAACTCTGGTTTGACAAACATCATCATGGGCTTGTCATTTATCACTGAGGGAGCGATTCCATTTG
GTGCCGCTGACCCAGCTCGTGCGATTCCAAGCTTCATCCTTGGTTCAGCAGTAGCAGGTGGACTCGTTGGTCTTACTGGTATC
AAACTCATGGCGCCACACGGAGGAATCTTCGTTATCGCCCTTACTTCAAATGCTCTCCTTTACCTCGTTTCTGTCTTGGTAGGA
GCAATCGTAAGTGGTGTGGTTTATGGTTACCTACGCAAACCACAAGCATAA

4175.6 (SEQ. ID. NO. 308)
ATGGCAAACAAGAATACAAGTACAACAAGACGGAGACCGTCTAAAGCAGAACTGGAAAGAAAAGAAGCGATTCAACGAAT
GTTGATTTCGTTAGGAATTGCGATTTTATTGATTTTCGCAGCCTTCAAATTAGGGGCTGCAGGTATAACCCTTTATAATTTAAT
TCGCTTGCTAGTGGGTAGCCTAGCTTATCTGGCGATATTCGGCCTATTAATCTATCTCTTCTTTTTCAAGTGGATACGAAAACA
GGAAGGACTCTTATCTGGCTTTTTCACCATATTTGCTGGCTTACTCTTGATTTTTGAGGCCTACTTGGTTTGGAAATATGGTTT
GGACAAGTCCGTTCTAAAAGGGACCATGGCTCAGGTTGTGACAGATCTGACTGGTTTTCGAACGACTAGCTTTGCTGGAGGG
GGCTTGATCGGGGTCGCTCTTTATATTCCAACAGCCTTTCTCTTTTCAAATATCGGAACTTACTTTATTGGTTCTATCTTGATTT
TAGTGGGTTCTCTCCTAGTCAGCCCTTGGTCTGTTTACGATATTGCTGAATTTTTCAGTAGAGGCTTTGCCAAATGGTGGGAA
GGGCACGAGCGTCGAAAAGAGGAACGCTTTGTCAAACAAGAAGAAAAAGCTCGCCAAAAGGCTGAGAAAGAGGCTAGATT
AGAACAAGAAGAGACTGAAAAAGCCTTACTCGATTTGCCTCCTGTTGATATGGAAACGGGTGAAATTCTGACAGAGGAAGC
TGTTCAAAATCTTCCACCTATTCCAGAAGAAAAGTGGGTGGAACCAGAAATCATCCTGCCTCAAGCTGAACTTAAATTCCCT
GAACAGGAAGATGACTCAGATGACGAAGATGTTCAGGTCGATTTTTCAGCCAAAGAAGCCCTTGAATACAAACTTCCAAGCT
TACAACTCTTTGCACCAGATAAACCAAAAGATCAGTCTAAAGAGAAGAAAATTGTCAGAGAAAATATCAAAATCTTAGAAG
CAACCTTTGCTAGCTTTGGTATTAAGGTAACAGTTGAACGGGCCGAAATTGGGCCATCAGTGACCAAGTATGAAGTCAAGCC
GGCTGTTGGTGTAAGGGTCAACCGCATTTCCAATCTATCAGATGACCTCGCTCTAGCCTTGGCTGCCAAAGATGTCCGGATTG
AAGCACCAATCCCTGGGAAATCCCTAATCGGAATTGAAGTGCCCAACTCCGATATTGCCACTGTATCTTTCCGAGAACTATG
GGAACAATCGCAAACGAAAGCAGAAAATTTCTTGGAAATTCCTTTAGGGAAGGCTGTTAATGGAACCGCAAGAGCTTTTGAC
CTTTCTAAAATGCCCCACTTGCTAGTTGCAGGTTCAACGGGTTCAGGGAAGTCAGTAGCAGTTAACGGCATTATTGCTAGCAT
TCTCATGAAGGCGAGACCAGATCAAGTTAAATTTATGATGGTCGATCCCAAGATGGTTGAGTTATCTGTTTACAATGATATTC
CCCACCTCTTGATTCCAGTCGTGACCAATCCACGCAAAGCCAGCAAGGCTCTGCAAAAGGTTGTGGATGAAATGGAAAACCG
TTATGAACTCTTTGCCAAGGTGGGAGTTCGGAATATTGCAGGTTTTAATGCCAAGGTAGAAGAGTTCAATTCCCAGTCTGAGT
ACAAGCAAATTCCGCTACCATTCATTGTCGTGATTGTGGATGAGTTGGCTGACCTCATGATGGTGGCCAGCAAGGAAGTGGA
AGATGCTATCATCCGTCTTGGGCAGAAGGCGCGTGCTGCAGGTATCCACATGATTCTTGCAACTCAGCGTCCATCTGTTGATG
TCATCTCTGGTTTGATTAAGGCCAATGTTCCATCTCGTGTAGCATTTGCGGTTTCATCAGGAACAGACTCCCGTACGATTTTGG
ATGAAAATGGAGCAGAAAAACTTCTTGGTCGAGGAGACATGCTCTTTAAACCGATTGATGAAAATCATCCAGTTCGTCTCCA
AGGCTCCTTTATCTCGGATGACGATGTTGAGCGCATTGTGAACTTCATCAAGACTCAGGCAGATGCAGACTACGATGAGAGT
TTTGATCCAGGTGAGGTTTCTGAAAATGAAGGAGAATTTTCGGATGGAGATGCTGGTGGTGATCCGCTTTTTGAAGAAGCTA
AGTCTTTGGTTATCGAAACACAGAAAGCCAGTGCGTCTATGATTCAGCGTCGTTTATCAGTTGGATTTAACCGTGCGACCCGT
CTCATGGAAGAACTGGAGATAGCAGGTGTCATCGGTCCAGCTGAAGGTACCAAACCTCGAAAAGTGTTACAACAATAA

4176.1 (SEQ. ID. NO. 309)
ATGAGTTATTTTAAAAAATATAAATTCGATAAATCCCAGTTCAAACTTGGTATGCGAACCTTTAAAACAGGTATTGCTGTTTT
TCTAGTTCTCTTGATTTTTGGCTTTTTTGGCTGGAAAGGTCTTCAAATTGGTGCTTTGACAGCCGTTTTTAGCCTGAGGGAGAG
TTTTGATGAGAGTGTTCATTTTGGGACTTCGCGTATTCTAGGAAATAGTATCGGTGGACTCTATGCCTTGGTCTTCTTCTTATT
AAATACCTTTTTCCACGAAGCCTTTTGGGTGACCTTGGTAGTTGTTCCAATCTGCACCATGTTAACCATTATGACAAATGTAG
CCATGAATAACAAAGCAGGGGTTATTGGTGGTGTAGCAGCTATGTTAATCATTACCCTATCAATTCCAAGTGGTGAGACAAT
TTTGTACGTGTTTGTGCGTGTATTAGAAACGTTTATGGGAGTTTTTGTCGCAATTATCGTAAATTACGATATTGATCGTATTCG
TCTCTTTTTAGAGAAAAAAGAAAAATAA

4178.2 (SEQ. ID. NO. 310)
ATGAATAAATCAGAACACCGCCACCAACTTATACGCGCTCTTATCACAAAAAACAAGATTCATACACAGGCTGAGTTGCAAG
CCCTTCTTGCTGAGAACGACATTCAAGTAACCCAGGCAACCCTCTCACGCGACATCAAAAATATGAACCTATCAAAAGTCCG
CGAAGAAGATAGCGCTTATTATGTTCTTAACAATGGTTCCATCTCAAAATGGGAAAAACGTCTCGAACTCTACATGGAAGAC
GCCCTTGTCTGGATGCGCCCAGTTCAACACCAAGTCCTACTAAAAACCCTTCCTGGACTGGCTCAATCCTTTGGTTCTATCATT
GATACTTTGAGCTTCCCTGACGCTATCGCTACCCTTTGTGGTAATGATGTCTGTCTTATCATCTGTGAAGATGCAGATACTGCT
CAAAAGTGCTTTGAAGAACTGAAAAAATTCGCCCCACCATTTTTCTTTGAAGAATAA

4179.1 (SEQ. ID. NO. 311)
ATGAAAAGTATAAAATTAAATGCTCTATCTTACATGGGAATTCGTGTCTTGAATATTATTTTTCCCATCCTAACTGGAACCTA
TGTCGCGCGTGTCTTGGACCGAACTGACTATGGTTACTTCAACTCAGTCGACACTATTTTGTCATTTTTCTTGCCCTTTGCAAC
TTATGGTGTCTATAACTACGGTTTAAGGGCTATCAGTAATGTCAAGGATAACAAAAAAGATCTTAACAGAACCTTTTCTAGTC
TTTTTTATTTGTGCATCGCTTGTACGATTTTGACCACTGCTGTCTATATCCTAGCCTATCCTCTCTTCTTTACTGATAATCCAAT
CGTCAAAAAGGTCTACCTTGTTATGGGGATTCAACTCATTGCCCAGATTTTTTCAATCGAATGGGTCAATGAAGCTCTGGAAA
ATTACAGTTTTCTCTTTTACAAAACTGCCTTCATCCGTATCCTGATGCTGGTCTCTATTTTCTTATTTGTTAAAAATGAACACG
ATATTGTTGTCTATACACTTGTGATGAGTTTATCGACGCTGATTAACTACCTGATTAGTTATTTTTGGATTAAAAGAGACATCA
AACTTGTTAAAATTCACCTAAGTGATTTTAAACCACTCTTTCTCCCTCTGACAGCCATGTTAGTCTTTGCCAATGCCAATATGC
TCTTCACTTTTTTAGATCGCCTCTTCCTCGTTAAAACAGGGATTGATGTCAACGTTAGTTACTATACCATAGCTCAGCGAATTG
TGACCGTTATAGCTGGGGTTGTAACAGGTGCAATTGGAGTGAGTGTGCCTCGTCTCAGTTACTATCTGGGGAAAGGAGACAA
AGAAGCCTATGTTTCTCTGGTTAATAGAGGTAGTCGAATCTTTAACTTCTTTATCATTCCACTGAGTTTTGGACTCATGGTTTT
AGGACCAAATGCCATCCTACTTTACGGTAGTGAAAAATATATCGGAGGCGGCATCTTGACCTCTCTCTTCGCTTTTCGTACGA
TTATCCTGGCCTTAGATACCATTCTTGGTTCCCAAATTCTCTTTACCAATGGCTATGAAAAACGTATCACAGTCTATACAGTCT
TTGCTGGGCTACTCAATTTGGGCTTGAATAGTCTCCTTTTTTTCAACCATATCGTGGCTCCTGAATACTACTTACTGACAACTA
TGCTATCAGAGACTTCTCTACTTGTTTTCTATATCATTTTCATCCATAGAAAACAACTCATCCACTTGGGACATATCTTTAGCT
ATACTGTTCGATACTCTCTCTTTTCACTTTCCTTTGTAGCAATTTATTTCCTGATTAATTTCGTGTATCCTGTAGATATGGTCAT
TAATTTGCCATTTTTGATTA
ATACTGGTTTGATTGTCTTGCTATCAGCTATCTCTTATATTAGTCTACTTGTCTTCACAAAAGATAGCATTTTCTATGAATTTTT
AAACCATGTCCTAGCCTTAAAAAATAAATTTAAAAAATCATAG

4179.2 (SEQ. ID. NO. 312)
ATGAAACAACTAACCGTTGAAGATGCCAAACAAATTGAATTAGAAATTTTGGATTATATTGATACTCTCTGTAAAAAGCACA
ATATCAACTATATTATTAACTACGGTACTCTGATTGGGGCGGTTCGACATGAGGGCTTTATCCCTTGGGACGACGATATTGAT
CTGTCCATGCCTAGAGAAGACTACCAACGATTTATTAACATTTTTCAAAAGGAAAAAAGCAAGTATAAGCTCCTATCCTTAG
AAACTGATAAGAACTACTTTAACAACTTTATCAAGATAACCGACAGTACGACTAAAATTATTGATACTCGAAATACAAAAAC
CTATGAGTCTGGTATCTTTATCGATATTTTCCCTATAGATCGCTTTGATGATCCTAAGGTCATTGATACTTGTTATAAACTGGA
AAGCTTCAAACTGCTGTCTTTCAGTAAACATAAAAATATTGTCTATAAGGATAGCCTTTTAAAAGATTGGATACGAACAGCCT
TCTGGTTACTCCTTCGACCGGTTTCTCCTCGTTATTTTGCAAATAAAATCGAGAAAGAAATTCAAAAATATAGTCGTGAAAAT
GGGCAATATATGGCTTTTATCCCTTCAAAATTTAAGGAAAAGGAAGTCTTCCCAAGTGGTACCTTTGATAAAACAATCGATTT
ACCCTTTGAGAATTTAAGCCTTCCTGCACCTGAAAAATTTGATACTATTTTGACACAATTTTATGGAGATTATATGACCCTAC
CACCAGAAGAAAAACGCTTCTACAGTCATGAATTTCACGCTTATAAATTGGAGGATTAG

4179.3 (SEQ. ID. NO. 313)
ATGATAAAAATCAATCATCTAACCATCACACAAAACAAAGATTTACGAGATCTTGTATCTGACCTAACCATGACCATCCAAG
ACGGGGAAAAGGTTGCTATTATTGGTGAAGAAGGAAATGGCAAATCAACCTTACTTAAAATTTTAATGGGGGAAGCTTTGTC
TGATTTCACTATCAAGGGAAACATCCAATCTGACTATCAGTCACTGGCCTACATTCCTCAAAAAGTCCCTGAGGACCTAAAA
AAGAAAACTTTACACGACTACTTCTTTTTAGATTCTATTGATTTAGACTACAGTATCCTCTATCGTTTGGCGGAGGAATTGCAT
TTTGATAGCAATCGTTTCGCAAGTGACCAAGAGATTGGCAATCTATCAGGGGGCGAAGCTTTGAAAATTCAGCTTATCCATG
AGTTAGCCAAACCCTTTGAGATTCTATTTTTAGATGAACCTTCAAATGACCTAGACCTTGAGACAGTTGATTGGCTAAAAGGC
CAGATTCAAAAGACCAGGCAAACCGTTATTTTCATTTCCCATGATGAAGACTTTCTTTCTGAAACGGCAGACACTATTGTTCA
CTTGCGACTGGTCAAACACCGTAAAGAAGCGGAAACGCTAGTAGAGCATTTAGACTATGATAGCTATAGTGAGCAGAGAAA
GGCTAATTTTGCCAAACAAAGTCAGCAAGCTGCTAACAACCAAAGAGCCTACGATAAAACCATGGAAAAACATCGGAGAGT
TAAGCAAAATGTAGAAACTGCGCTTCGAGCTACCAAAGATAGTACTGCCGGTCGCCTATTGGCTAAAAAGATGAAAACTGTC
CTCTCACAAGAAAAACGCTACGAAAAGGCAGCTCAGTCCATGACTCAAAAGCCACTTGAAGAGGAACAAATCCAACTTTTCT
TTTCAGACATCCAACCATTACCAGCTTCTAAAGTCTTAGTCCAACTGGAAAAAGAAAATTTGTCCATTGACGACCGAGTTTTG
GTTCAAAAACTACAACTAACTGTCCGTGGCCAAGAAAAAATCGGTATTATCGG
GCCAAATGGTGTTGGGAAATCAACTCTGTTAGCCAAGTTACAGAGACTTCTGAATGATAAAAGAGAGATTTCACTTGGTTTT
ATGCCACAAGATTACCACAAAAAACTGCAATTGGATTTATCCCCAATAGCCTATCTCAGTAAAACTGGGGAAAAAGAGGAA
CTACAGAAAATCCAATCTCACCTAGCTAGTCTCAATTTCAGTTATCCAGAAATGCAGCATCAAATTCGCTCCTTATCTGGCGG
ACAACAGGGAAAACTCCTGCTTTTGGATTTAGTCCTGCGCAAACCAAACTTTCTCCTGCTGGATGAACCCACACGAAACTTTT
CTCCCACTTCTCAACCCCAAATCAGAAAACTCTTTGCTACCTATCCAGGCGGTCTCATCACTGTTTCGCATGACCGTCGTTTCT
TAAAAGAAGTCTGCTCGATCATCTATCGCATGACAGAACACGGTTTGAAGCTAGTTAATTTAGAAGATTTATAA

4179.4 (SEQ. ID. NO. 314)
ATGAAACCAAAAACATTTTACAACTTGCTTGCCGAGCAGAATCTTCCACTTTCGGACCAGCAAAAAGAACAATTTGAACGTT
ATTTTGAGCTCTTGGTCGAGTGGAATGAGAAGATTAATTTGACGGCGATTACGGACAAGGAAGAAGTTTATCTCAAACATTT
TTACGATTCGATTGCACCCATTCTTCAAGGTTTGATTCCCAATGAAACTATCAAACTTCTTGATATCGGGGCTGGGGCAGGAT
TTCCTAGTCTACCAATGAAAATTCTCTATCCGGAGTTAGATGTGACCATTATTGATTCACTCAATAAGCGCATCAACTTCCTA
CAACTCTTGGCTCAAGAACTGGATTTGAACGGAGTTCATTTCTACCACGGACGTGCCGAAGATTTTGCCCAAGACAAGAACT
TCCGTGCTCAATATGATTTTGTAACAGCTCGTGCGGTTGCCCGTATGCAGGTCCTATCTGAATTGACTATTCCCTACCTTAAGG
TTGGTGGCAAACTATTAGCACTCAAGGCTAGCAATGCGCCTGAGGAATTATTAGAAGCTAAGAATGCCCTCAATCTCCTTTTT
AGTAAGGTCGAAGACAATCTCAGctACGCCCTACCGAATAGAGATCCGCGCTATATCACAGTGGTAGAAAAGAAAAAAGAAA
CACCAAATAAATATCCACGTAAGGCTGGTATGCCAAATAAACGCCCACTTTAA

4179.6 (SEQ. ID. NO. 315)

ATGAGTATTAAACTAATTGCCGTTGATATCGACGGAACCCTTGTCAACAGCCAAAAGGAAATCACTCCTGAAGTTTTTTCTGC
CATCCAAGATGCCAAAGAAGCTGGTGTCAAAGTCGTGATTGCAACTGGCCGCCCTATCGCAGGCGTTGCCAAACTTCTAGAC
GACTTGCAGTTGAGAGACGAGGGGGACTATGTGGTAACCTTCAACGGTGCCCTTGTCCAAGAAACTGCTACAGGACATGAGA
TTATCAGCGAATCCTTGACTTATGAGGATTATCTAGATATGGAATTCCTCAGTCGCAAGCTCGGTGTCCACATGCATGCCATT
ACCAAGGACGGTATCTATACTGCAAATCGCAATATCGGAAAATACACTGTACACGAATCAACCCTCGTCAGCATGCCTATCT
TCTACCGTACCCCTGAAGAAATGGCTGGCAAAGAAATTGTTAAATGTATGTTTATCGATGAACCAGAAATTCTCGATGCTGC
GATTGAAAAAATTCCAGCAGAATTTTACGAGCGCTACTCCATCAACAAATCTGCTCCTTTCTACCTCGAACTCCTTAAAAAGA
ATGTAGACAAGGGTTCAGCCATTACTCACTTGGCTGAAAAACTCGGATTGACCAAAGATGAAACCATGGCAATCGGTGATGA
AGAAAATGACCGTGCCATGCTGGAAGTCGTTGGAAACCCCGTTGTCATGGAAAATGGAAATCCAGAAATCAAAAAAATCGC
CAAATACATCACCAAAACAAATGACGAATCCGGCGTTGCCCATGCCATCCGAACATGGGTACTGTAA

4179.7 (SEQ. ID. NO. 316)
ATGACTTGGATTATTCTTGGAGTTATCGCTCTTATTGTTATTTTTGTGATTGTTAGCTATAACGGTTTGGTTAAAAATCGTATG
CAAACCAAGGAGGCTTGGAGTCAGATTGATGTTCAGTTGAAACGTCGCAATGACCTCTTGCCAAACTTGATTGAGACTGTAA
AAGGTTATGCCAAATATGAAGGTTCTACCCTTGAAAAGGTGGCAGAACTACGTAACCAAGTGGCGGCAGCGACTTCACCAGC
AGAAGCTATGAAAGCCAGTGATGCCCTCACTCGTCAGGTTTCAGGTATTTTTGCAGTTGCAGAAAGCTATCCAGATTTGAAA
GCTAGTGCTAACTTTGTTAAATTGCAAGAGGAGTTGACAAACACAGAAAATAAAATTTCTTACTCTCGTCAACTCTATAACA
GTGTTGTCAGCAACTACAATGTAAAATTAGAAACTTTCCCGAGCAATATTATCGCTGGAATGTTTGGATTTAAAGCGGCAGA
TTTCCTTCAAACACCTGAAGAGGAAAAGTCGGTTCCTAAAGTTGATTTTAGCGGTTTAGGTGACTAA

4179.8 (SEQ. ID. NO. 317)
ATGTTGTTTGATCAAATTGCAAGCAATAAACGAAAAACCTGGATTTTGTTGCTGGTATTTTTCCTACTCTTAGCTCTTGTTGGT
TATGCGGTTGGTTATCTCTTTATAAGATCTGGACTTGGTGGTTTGGTTATTGCACTGATTATCGGCTTTATCTACGCTTTGTCT
ATGATTTTTCAATCGACAGAGATTGTCATGTCCATGAATGGAGCGCGTGAGGTGGATGAGCAAACGGCACCAGACCTCTACC
ATGTAGTGGAAGATATGGCTCTGGTCGCTCAGATTCCTATGCCCCGTGTTTTCATCATTGATGATCCAGCCTTAAATGCCTTTG
CGACAGGTTCTAATCCTCAAAATGCGGCTGTTGCTGCGACTTCAGGTCTACTAGCTATCATGAATCGTGAAGAACTAGAAGC
TGTTATGGGACATGAAGTCAGTCATATTCGTAATTATGATATCCGTATTTCGACTATTGCAGTTGCCCTTGCTAGTGCTATCAC
CATGCTTTCTAGTATGGCAGGTCGTATGATGTGGTGGGGTGGAGCAGGTCGCAGACGAAGTGATGATGACCGAGATGGAAAT
GGTCTTGAAATCATTATGCTAGTGGTTTCCCTACTAGCTATTGTACTGGCACCTCTCGCTGCAACCTTGGTTCAGCTCGCTATT
TCTCGTCAGAGGGAATTTCTGGCAGATGCATCTAGTGTCGAGCTGACTCGCAATCCCCAGGGAATGATTAATGCCCTAGATA
AGTTGGACAATAGCAAACCTATGAGTCGCCACGTCGATGATGCTAGCAGTGCCCTTTATATCAATGATCCTAAGAAAGGTGG
GGGGTTCCAAAAACTCTTTTATACCCACCCACCTATCTCAGAACGGATTGAACGTTTAAAACAGATGTAA

4179.9 (SEQ. ID. NO. 318)
ATGAAATTAAATATTCAAGAAATTCGTAAGCAGTCTGAAGGTTTGAACTTTGAACAAACGTTAGATTTAGTTGATGACCTGC
GTGCACGTAATCAAGAAATTTTAGATGTAAAAGATATCCTTGCAGTTGGGAAAGTACAATATGAAGACCGTATGTATTTCTT
AGATTATCAACTATCTTATACCATTGTTCTTGCTTCGAGTCGCAGTATGGAGCCAGTTGAGTTAGTTGAATCTTATCCAGTCAC
GGAAGTTTTCATGGAAGGCGCAACTAACCAGCTAGATCAAGAAGTTTTAGATGATGACTTGGTCTTGCCCATCGAAAATGGG
GAGCTTGACCTTGCTGAGAGTGTATCAGACAATATCCTGCTAAACATTCCTATCAAGGTCTTGACGGCTGAAGAAGAAGCTG
GTCAAGGATTTATCTCAGGAAATGACTGGCAAATCATGACAGAGGAAGAATACCAAGCTCAAAAAGCAGTAAAGAAAGAAG
AAAACAGTCCTTTTGCTGGCTTACAAGGACTATTTGACGGAGATGAATAA

4179.12 (SEQ. ID. NO. 319)
ATGGAGTTATTTATGAAAATCACAAACTATGAAATCTATAAGTTAAAAAAATCAGGTTTGACCAATCAACAGATTTTGAAAG
TGCTAGAATACGGTGAAAATGTTGATCAGGAGCTTTTGTTGGGTGATATTGCAGATATCTCAGGTTGCCGTAATCCAGCCGTT
TTTATGGAACGTTATTTTCAGATAGACGATGCGCATTTGTCGAAAGAGTTTCAAAAATTTCCATCTTTCTCTATTTTAGATGAC
TGTTATCCTTGGGATTTGAGTGAAATATATGATGCGCCTGTACTTTTATTTTACAAGGGAAATCTTGACCTCCTGAAATTCCCG
AAGGTAGCGGTCGTGGGCAGTCGTGCTTGTAGCAAACAGGGAGCTAAGTCAGTTGAAAAAGTCATTCAAGGCTTGGAAAAT
GAACTGGTTATTGTCAGTGGTCTGGCCAAGGGCATTGACACAGCAGCTCATATGGCAGCTCTTCAGAATGGCGGAAAAACCA
TTGCAGTGATTGGAACAGGACTGGATGTGTTTTATCCTAAAGCCAATAAACGCTTGCAAGACTACATCGGCAATGACCATCT
GGTTCTAAGTGAATATGGACCTGGTGAACAACCTCTGAAATTTCATTTTCCTGCCCGTAATCGCATCATTGCTGGACTTTGTC
GTGGTGTGATTGTAGCAGAGGCTAAGATGCGTTCAGGTAGTCTCATTACGTGTGAGCGAGCAATGGAAGAAGGACGCGATGT
CTTTGCTATTCCTGGTAGCATTTTAGATGGACTATCAGACGGTTGCCATCATTTGATTCAAGAAGGAGCAAAATTGGTCACCA
GTGGGCAAGATGTTCTTGCGGAATTTGAATTTTAA

4181.1 (SEQ. ID. NO. 320)
ATGAAACGTCAATTAGCCTTGGTCGTCTTTAGTGGTGGTCAAGATTCAACAACCTGCCTTTTCTGGGTCATGCAACACTATGA
AACAGTCGAAGCTGTCACCTTTGCCTACGGCCAACGTCATCACCTCGAAATTCAAATTACTAGAGAAATCGCTAAGGAACAG
GGCATTCGTCACCATATCCTCGATATGTCTCTGCTGGGACAAATCACTGCTCAGCCAGACTTTGCGACGATTCATATTTCCTA
CATTCCTGACAAGCTCTGTGTCGAGTCAAAATCCCTCAAACTATATCTATTTAGCTACCGAAACCACGGAGATTTCCACGAAA
ACTGTATCAACACCATCGGGAAAGACTTGGTCAACTTGCTAGACCCTCGCTATTTAGAAGTCTGGGGAAAATTCACTCCGCG
CGGTGGCATTTCAATCGACCCCTACTACAACTACGGTAAGCAAGGAACTAAGTATGAGGGCTTGGCAGAACAACGCCTCTTC
CAACACGACCTTTATCCAGAGAAAATTGACAACCGCTAA

4181.2 (SEQ. ID. NO. 321)
ATGACCGAAACGGTAGAAGATAAAGTAAGTCATTCAATTACTGGGCTTGATATCCTCAAGGGGATAGTTGCTGCGGGAGCTG
TCATAAGTGGAACCGTTGCAACTCAAACGAAGGTATTTACAAATGAGTCAGCAGTACTTGAAAAAACTGTAGAGAAAACGG
ATGCTTTGGCAACAAATGATACAGTAGTTCTAGGTACGATATCTACAAGTAATTCAGCGAGTTCAACTAGTTTGTCAGCTTCA
GAGTCGGCAAGTACATCTGCATCTGAGTCAGCCTCAACCAGCGCTTCGACCTCAGCAAGTACAAGTGCATCAGAATCAGCAA
GTACATCGGCTTCGACAAGTATTTCTGCATCATCTACTGTGGTAGGTTCACAAACAGCTGCCGCTACAGAAGCAACTGCTAA
GAAGGTCGAAGAAGATCGTAAGAAACCAGCTAGTGATTATGTAGCATCAGTTACAAATGTCAATCTCCAATCTTATGCTAAG
CGACGCAAGCGTTCAGTGGATTCCATCGAGCAATTGCTGGCTTCTATAAAAAATGCTGCTGTTTTTTCTGGCAATACGATTGT
AAATGGCGCCCCTGCAATTAATGCAAGTCTAAACATTGCTAAAAGTGAGACAAAAGTTTATACAGGTGAAGGTGTAGATTCG
GTATATCGTGTTCCAATTTACTATAAATTGAAAGTGACAAATGATGGTTCAAAATTGACCTTTACCTATACGGTTACGTATGT
GAATCCTAAAACAAATGATCTTGGTAATATATCAAGTATGCGTCCTGGATATTCTATCTATAATTCAGGTACTTCAACACAAA

CAATGTTAACCCTTGGCAGTGATCTTGGTAAACCTTCAGGTGTAAAGAACTACATTACTGACAAAAATGGTAGACAGGTTCT
ATCCTATAATACATCTACAATGACGACGCAGGGTAGTGGGTATACTTGGGGAAATGGTGCCCAAATGAATGGTTTCTTTGCT
AAGAAAGGATATGGATTAACATCATCTTGGACTGTACCAATTACTGGAACGGA
TACATCCTTTACATTTACCCCTTACGCTGCTAGAACAGATAGAATTGGAATTAACTACTTCAATGGTGGAGGAAAGGTAGTTG
AATCTAGCACGACCAGTCAGTCACTTTCACAGTCTAAGTCACTCTCAGTAAGTGCTAGTCAAAGCGCCTCAGCTTCAGCATCA
ACAAGTGCGTCGGCTTCAGCATCAACCAGTGCCTCGGCTTCAGCGTCAACCAGTGCGTCAGCTTCAGCAAGTACCAGTGCTT
CAGTCTCAGCATCAACAAGTGCTTCAGCCTCAGCATCGACAAGTGCCTCGGCTTCAGCAAGCACATCAGCATCTGAATCAGC
GTCAACCAGTGCTTCGGCTTCAGCAAGTACCAGTGCTTCAGCTTCAGCATCAACCAGCGCCTCGGCCTCAGCAAGCACCTCA
GCTTCTGAATCGGCCTCAACCAGCGCCTCGGCCTCAGCAAGCACCTCAGCTTCTGAATCGGCCTCAACCAGCGCCTCAGCCTC
AGCATCAACGAGTGCTTCGGCTTCAGCAAGCACAAGCGCCTCGGGTTCAGCATCAACGAGTACGTCAGCTTCAGCGTCAACC
AGTGCTTCAGCCTCAGCATCAACAAGTGCGTCAGCCTCAGCAAGTATCTCAGCGTCTGAATCGGCATCAACGAGTGCGTCTG
AGTCAGCATCAACGAGTACGTCAGCCTCAGCAAGCACCTCAGCTTCTGAATCGGCCTCAACCAGTGCGTCAGCCTCAGCATC
GACAAGCGCCTCAGCTTCAGCAAGTACCAGTGCTTCAGCCTCAGCGTCGACAAGTGCGTCGGCCTCAACCAGTGCATCTGAA
TCGGCATCAACCAGTGCGTCAGCCTCAGCAAGTACTAGTGCATCGGCTTCAGCATCAACCAGTGCCTCGGCTTCAGCGTCAA
CCAGTGCGTCAGCTTCAGCAAGTACCAGTGCTTCAGTCTCAGCATCAACAAGTGCTTCAGCCTCAGCATCGACAAGTGCCTC
GGCTTCAGCAAGCACATCAGCATCTGAATCAGCGTCGACAAGCGCCTCAGCTTCAGCAAGTACCAGTGCGTCAGCTTCAGCA
TCAACCAGCGCCTCGGCCTCAGCAAGCACCTCAGCTTCTGAATCGGCCTCAACCAGCGCCTCGGCCTCAGCAAGCACCTCAG
CTTCTGAATCGGCCTCAACCAGCGCCTCAGCCTCAGCATCAACGAGTGCTTCGGCTTCAGCAAGCACAAGCGCCTCGGGTTC
AGCATCAACGAGTACGTCAGCTTCAGCGTCAACCAGTGCTTCAGCCTCAGCATCAACAAGTGCGTCAGCCTCAGCAAGTATC
TCAGCGTCTGAATCGGCATCAACGAGTGCGTCTGAGTCAGCATCAACGAGTACGTCAGCCTCAGCAAGCACCTCAGCTTCTG
AATCGGCCTCAACCAGTGCGTCAGCCTCAGCATCGACAAGCGCCTCAGCTTCAGCAAGTACCAGTGCTTCAGCCTCAGCTCG
ACAAGTGCGTCGGCCTCAACCAGTGCATCTGAATCGGCATCAACCAGTGCGTCAGCCTCAGCAAGTACTAGTGCATCAGCTT
CAGCATCAACGAGTGCATCGGCTTCAGCATCAACCAGTGCCTCGGCTTCAGCGTCAACCAGTGCGTCAGCTTCAGCAAGTAC
CAGTGCTTCAGTCTCAGCATCAACAAGTGCTTCAGCCTCAGCATCGACAAGTGCcTCGGCTTCAGCAAGCACATCAGCATCTG
AATCAGCGTCGACAAGCGCcTCAGCTTCAGCAAGTACCAGTGCGTCAGCCTCAGCGTCGACAAGTGCGTCAGCCTCAGCAAG
TACTAGTGCATCAGCTTCAGCATCAACGAGTGCATCGGCTTCGGCGTCAACCAGTGCATCAGAGTCAGCAAGTACCAGTGCG
TCAGCTTCCGCATCAACAAGTGCCTCGGCTTCAGCAAGCACCAGTGCGTCGGCTTCAGCAAGTACTAGCGCCTCAGCCTCAG
CCTCAACCAGTGCGTCAGCCTCAGCAAGTATCTCAGCGTCTGAATCGGCATCAACGAGTGCGTCCGCTTCAGCAAGTACTAG
CGCCTCAGCCTCAGCGTCAACAAGTGCATCGGCTTCAGCGTCAACGAGTGCGTCTGAATCGGCATCAACGAGTGCGTCCGCT
TCAGCAAGTACTAGCGCCTCAGCCTCAGCGTCAACAAGTGCATCGGCTTCAGCATCAACGAGTGCGTCCGCTTCAGCAAGTA
CTAGCGCCTCAGCCTCAGCGTCAACAAGTGCATCGGCTTCAGCGTCAACGAGTGCGTCTGAGTCAGCATCAACGAGTGCGTC
AGCCTCAGCAAGCACATCAGCTTCTGAATCTGCATCAACCAGTGCGTCAGCCTCAGCATCGACAAGCGCCTCAGCTTCAGCA
AGTACCAGTGCGTCAGCCTCAGCGTCGACAAGTGCGTCGGCTTCAGCAAGTACCAGTGCGTCAGCCTCAGCAAGTACCAGTG
CGTCAGCCTCAGCGTCGACAAGTGCGTCGGCCTCAACCAGTGCATCTGAATCGGCATCAACCAGTGCGTCAGCCTCAGCAAG
TACTAGTGCATCAGCTTCAGCATCAACGAGTGCATCGGCTTCAGCATCAACCAGTGCATCAGAGTCAGCAAGTACCAGTGCG
TCAGTTCCGCATCAACAAGTGCCTCGGCTTCAGCAAGTACTAG

4183.1 (SEQ. ID. NO. 322)
ATGGGGGTCGAAACTTGGTTTTATTCTAGCATCTGCTGGCTGGCCATCGGGCTTGGTTCCGTTTGGAAGTTTCCCTACATGAC
TGCTGCTAATGGCGGTGGAGGCTTTTTACTAATCTTTCTCATTTCCACTATTTTAATCGGTTTCCCTCTCCTGCTGGCTGAGTTT
GCCCTTGGCCGTAGTGCTGGCGTTTCCGCTATCAAAACCTTTGGAAAACTGGGCAAGAATAACAAGTACAACTTTATCGGTT
GGATTGGCGCCTTTGCCCTCTTTATCCTCTTATCTTTTTACAGTGTTATCGGAGGATGGATTCTAGTCTATCTAGGTATTGAGT
TTGGGAAATTGTTCCAACTTGGTGGAACGGGTGATTATGCTCAGTTATTTACTTCAATCATTTCAAATCCAGCCATTGCCCTA
GGAGCTCAAGCGGCCTTTATCCTATTGAATATCTTCATTGTATCACGTGGGGTTCAAAAAGGGATTGAAAGAGCTTCGAAAG
TCATGATGCCCCTGCTCTTTATCGTCTTTGTTTTTATCATCGGTCGCTCTCTCAGTTTGCCAAATGCCATGGAAGGGGTTCTTT
ACTTCCTCAAACCAGACTTTTCAAAACTGACTAGCACTGGTCTCCTCTATGCTCTGGGACAATCTTTCTTTGCCCTCTCACTAG
GGGTTACAGTCATGTTGACCTATGCTTCTTACTTAGACAAGAAAACCAATCTAGTCCAGTCAGGAATCTCCATCGTAGCCATG
AATATCTCGATATCCATCATGGCAGGTCTAGCCATTTTCCAAGCTCGATCCCCCTTCAATATCCAGTCTGAAGGGGGACCCAG
CCTGCTCTTTATCGTCTTGCCTCAACTCTTTGACAAGATGCCTTTTGGAACCATTTTCTACGTCCTCTTCCTCTTGCTCTTCCTT
TTTGCGACAGTCACTTTTTCTGTCGTGATGCTGGAAATCAATGTAGACAATATCACCAACCAGGATAACAGCAAACGTGCCA
AATGGAGTGTTATTTTAGGAATTTTGACCTTTGTCTTTGGCATTCCTTCAGCCCTATCTTACGGTGTCATGGCGGATGTTCACA
TTTTTGGTAAGACCTTCTTTGACGCTATGGACTTCTTGGTTTCCAATCTCCTCATGCCATTTGGAGCTCTCTACCTTTCACTTTT
TACAGGCTATATCTTTAAAAAGGCTCTTGCAATGGAGGAACTCCATCTCGATGAAAGAGCATGGAAACAAGGACTGTTCCAA
GTCTGGCTCTTCCTTCTTCGTTTCTTCGTTTCGTCATTCCAATCATCATCATTGTGGTCTTCATTGCCCAATTTATGTAATCAAA
AAGGACTTGAGTAG

4183.5 (SEQ. ID. NO. 323)
ATGTTGAAAAAATGGCAGTTAAAAGATGTTATCTTGCTTGCTTTCTTGTCTATCTTTTTTGGTGGGGTTTTCGTTGGTTCAGGA
TATGTGTATAATATTCTCAGTCTACTCTTAACACCTCTTGGTTTGCAGGCCTTTGCCAATGAAATCCTCTTCGGTCTCTGGTGT
ATGGCTGCGCCCATTGCTGCCATCTTTGTTCCGAGAGTCGGAAGTGCAACGATTGGAGAAGTGCTAGCTGCGCTTGCTGAAG
TCCTTTATGGTAGCCAATTTGGTCTAGGAGCTCTTTTGTCTGGCTTTGTTCAAGGTTTGGGAAGTGAATTTGGTTTTATCGTAA
CTAAGAATCGCTATGAAAGTTGGCTCTCTCTAACTGCTAATAGTATTGGGATTACGCTTGTTAGCTTTGTCTATGAATACATT
AAGTTAGGTTACTACGCCTTTTCCCTTCCGTTTGTCCTTTCCTTGCTTGTGGTACGTTTTATTTCTGTTTATTTCTTCTGTACCAT
CTTGGTTCGTGCCATTGTCAAACTCTATCATCAGTTTGCAACTGGAGGAAAAGCATAG

4183.6 (SEQ. ID. NO. 324)
ATGGTCAAAGTAGCAACCCAGACACCGATTATCAGTCTCTTCTTGCTGATTTTATCCTTGGAAACATCTTTCATTCCTTCGATT
GCTCTGACTCTTTCGGTAGTCGCATTTTGTATTCTCTTTATGCTCTATTACCGTCGATTTAAAATGTTAGCTTGGATGATCATA
CTTGCCATTTTACCATCTTTTGCCAACTACTGGGCAGTTCAGTTACACGGAGATGCTTCACAGGCAGTCATGCTTGGAACGAG
GGCCTTTGTGACAGTTTGTATCGGCCTTGTCTTTGTTTCCTCTGTTTCACTAAAAGAGCTTCTCTTGTACTTGGCTCAAAAGGG
GCTATCACGCTCTTGGTCCTATGCCTTGATTGTGGTATTCAATTCTTTTCCTCTCATTCAGCAAGAAATCAAGTCCCTCAAAGA
AGCTTGCCTATTACGTGGTCAAGAACTACATTTTTGGTCGCCCTTGATTTACAGTAAGGTTCTGATGACAGTCTTTAGGTGGC
GCCATCTTTACCTGAGAGCTCTATCTGCTCACGGATATGACGAACATGCACAGTTGAAGAATAGCTATCGGACTTTTTATATT
CCTAAAAAAACAAAATTAATCTACCTGCTTTTCTTTTTATTGCTTCAAACCAGTCTATTTTTATAA

4183.7 (SEQ. ID. NO. 325)
ATGAGAAAGCACCAATTACAAGTTCACAAATTAACCATTTTATCTATGATGATTGCCCTTGATGTAGTCCTTACACCTATCTT
TCGAATTGAGGGAATGGCACCGATGTCCAGTGTAGTCAATATTCTAGCAGGAATCATGATGGGACCTGTTTATGCCTTGGCT
ATGGCTACAGTCACAGCCTTTATCCGTATGACGACTCAAGGGATTCCGCCTTTAGCTCTCACAGGAGCGACTTTTGGAGCCCT
TCTAGCAGGTCTCTTTTATAAGTACGGTCGAAAATTTCACTATTCTGCTCTAGGAGAGATTTTGGGAACAGGTATTATTGGTT
CCATTGTTTCCTATCCTGTTATGGTACTCTTTACAGGATCAGCTGCTAAGCTTAGCTGGTTTATCTACACGCCTCGATTTTTCG
GAGCAACCTTGATTGGTACAGCGATTTCCTTTATTGCCTTTCGATTTTTAATCAAGCAGGAATTCTTTAAAAAAGTGCAGGGA
TATTTCTTTAGTGAAAGGATAGACTGA

4183.8 (SEQ. ID. NO. 326)
ATGCAGGAATTTACAAATCCCTTTCCTATAGGCTCTAGTTCCCTCATTCACTGCATTACCAATGAGATTTCTTGTGAGATGCTG
GCAAATGGGATTTTGGCTCTGGGATGCAAACCTGTCATGGCAGATGATTCCCGTGAAGTTCTTGATTTTACTAAGCAAAGTCA
GGCTCTCTTCATCAATTTGGGGCATTTGTCAGCTGAGAAGGAAAAAGCAATCCGCATGGCAGCTTCGTATGCAAACCAATCT
TCTCTCCCGATGGTAGTAGATGCGGTTGGCGTAACGACTTCATCCATTCGTAAGAGCTTAGTTAAAGACCTTTTAGACTATAG
ACCTACGGTCCTTAAAGGAAACATGTCAGAAATTCGAAGTCTTGTTGGATTAAAGCACCACGGCGTTGGGGTCGATGCGAGT
GCTAAAGATCAAGAAACGGAGGATTTGCTTCAAGTCTTGAAAGACTGGTGTCAGACCTATCCTGGTATGTCTTTCTTAGTCAC
AGGTCCCAAGGACCTCGTCGTTTCGAAAAATCAGGTCGCTGTACTGGGAAATGGCTGTACTGAATTAGACTGGATAACAGGG
ACAGGAGACTTGGTTGGAGCCTTAACAGCTGTTTTTCTCAGCCAAGGAAAGACTGGTTTTGAAGCTTCTTGCTTAGCAGTCTC
TTATCTCAATATCGCTGCTGAGAAAATAGTTGTTCAAGGAATGGGATTGGAAGAATTTCGTTACCAAGTACTCAATCAGCTTT
CGCTCCTAAGAAGAGATGAAAATTGGCTAGATACCATCAAAGGAGAGGTTTATGAATAG

4185.3 (SEQ. ID. NO. 327)
ATGAACCATAAAATCGCAATTTTATCAGATGTTCATGGCAATGCGACGGCGCTAGAAGCAGTGATTGCAGATGCTAAAAATC
AAGGGGCCAGTGAATATTGGCTTCTGGGAGATATTTTTCTTCCTGGTCCAGGCGCAAATGACTTAGTCGCCCTGCTAAAGGAC
CTTCCTATCACAGCAAGTGTTCGAGGCAATTGGGATGATCGTGTCCTTGAGGCTTTAGATGGGCAATATGGCTTAGAAGACC
CACAGGAAGTTCAGCTCTTGCGTATGACACAGTATTTGATGGAGCGAATGGATCCTGCAACGATTGTCTGGCTACGAAGCTT
GCCTTTGCTGGAAAAGAAAGAAATTGACGGATTGCGCTTTTCTATCTCTCATAATTTACCTGACAAAAACTATGGTGGTGACT
TGCTAGTTGAGAATGATACAGAGAAATTTGACCAACTGCTAGATGCGGAAACGGACGTGGCAGTTTATGGTCATGTTCACAA
GCAGTTGCTTCGTTATGGAAGTCAAGGGCAACAAATCATCAATCCAGGGTCGATTGGCATGCCCTATTTTAATTGGGAGGCG
TTAAAAAATCACCGTTCCCAGTATGCCGTGATAGAAGTTGAAGATGGGGAATTACTCAATATCCAATTTCGTAAAGTTGCTTA
TGATTACGAAGCTGAGTTAGAATTGGCCAAGTCCAAGGGGCTTCCCTTTATCGAAATGTATGAAGAACTGCGTCGTGACGAT
AACTATCAGGGGCACAATCTGGAATTATTAGCCAGCTTAATAGAAAAGCATGGGTATGTAGAGGATGTGAAGAATTTTTTTG
ATTTTTTGTAA

4186.1 (SEQ. ID. NO. 328)
ATGAATGTAAATCAGATTGTACGGATTATTCCTACTTTAAAAGCTAATAATAGAAAATTAAATGAAACATTTTATATTGAAAC
CCTTGGAATGAAGGCCTTGTTAGAAGAATCGGCCTTTCTGTCACTAGGTGACCAAACGGGTCTTGAAAAGCTGGTTTTAGAA
GAAGCTCCCAGTATGCGTACTCGTAAGGTAGAGGGAAGAAAAAAACTAGCTAGATTGATTGTCAAGGTGGAAAATCCCTTA
GAAATTGAAGGAATCTTATCTAAAACAGATTCGATTCATCGATTATATAAAGGTCAAAATGGCTACGCTTTTGAAATTTTCTC
ACCAGAAGATGATTTGATTTTGATTCATGCGGAAGATGACATAGCAAGTCTAGTAGAAGTAGGAGAAAAGCCTGAATTTCAA
ACAGATTTGGCATCAATTTCTTTAAGTAAATTTGAGATTTCTATGGAATTACATCTCCCAACTGATATCGAAAGTTTCTTGGA
ATCATCTGAAATTGGGGCATCCCTTGATTTTATTCCAGCTCAGGGGCAGGATTTGACTGTGGACAATACGGTTACCTGGGACT
TATCTATGCTCAAGTTCTTGGTCAATGAATTAGACATAGCAAGTCTTCGCCAGAAGTTTGAGTCTACTGAATATTTTATTCCTA
AGTCTGAAAAATTCTTCCTTGGTAAAGATAGAAATAATGTTGAATTGTGGTTTGAAGAAGTATGA

4186.2 (SEQ. ID. NO. 329)
ATGAAGTGGACCAAGATTATTAAAAAAATAGAAGAACAAATCGAGGCAGGGATTTATCCCGGAGCCTCTTTTGCGTATTTTA
AGGACAATCAATGGACAGAGTTCTATTTAGGCCAGAGTGACCCAGAGCATGGCTTGCAGACTGAGGCAGGACTAGTTTATGA
CCTAGCTAGTGTCAGCAAGGTTGTTGGGGTTGGCACAGTTTGTACCTTCTTGTGGGAAATAGGTCAATTAGATATTGATAGAC
TGGTAATAGATTTTTTACCTGAGAGTGATTATCCAGACATCACTATTCGCCAGCTCTTGACTCATGCAACAGACCTTGATCCT
TTTATTCCTAATCGTGATCTTTTAACAGCCCCTGAATTAAAGGAAGCGATGTTTCATCTCAACAGACGAAGTCAGCCAGCCTT
TCTTTATTCGGATGTCCATTTTTTGCTGTTGGGCTTTATTTTGGAAAGAATTTTTAATCAAGATTTGGATGTGATTTTAAAGGA
TCAAGTCTGGAAACCTTGGGGAATGACGGAAACTAAGTTTGGGCCAGTTGAGCTTGCTGTTCCAACAGTTAGAGGTGTAGAG
GCAGGCATAGTGCATGATCCCAAGGCTCGTCTCCTGGGTAGACATGCTGGGAGTGCTGGTTTATTTTCGACTATAAAGGATTT
ACAAATCTTTTTAGAACACTATTTAGCAGATGATTTTGCAAGAGACTTAAATCAAAATTTTTCTCCTTTGGATGACAAGGAAC
GTTCTTTAGCATGGAATTTGGAAGGAGATTGGCTAGACCATACGGGCTATACAGGTACCTTTATCATGTGGAATCGTCAGAA
GCAAGAAGCCACTATTTTCCTATCGAATCGTACCTATGAAAAGGACGAGAGAGCTCAATGGATATTAGACCGCAATCAAGTG
ATGAACTTGATTCGCAAAGAAGAGTAA

4187.2 (SEQ. ID. NO. 330)
ATGATGAAGAAGACTTATAATCATATTTTGGTCTGGGGAGTCATTTTCTATAGCATTTGCATTGTCTGTTTTTGCTTTACTCCT
CAAGAACAATCTACCGTGGGAGTGGGAACTCCAGGTATTCAGCATCTTGGACGCCTGGTTTTTCTTTTGACTCCTTTCAATTC
TCTCTGGAAACTGGGCGAAGTGAGTGACATTGGACAATTATGTTGGATTTTTTTACAAAATATCCTCAATGTCTTCTTGTTTTT
TCCTCTGATTTTCCAACTCCTTTATCTATTTCCAAATTTGCGGAAAACAAAAAAGGTCCTTCTTTTTAGTTTTCTTGTGAGTCTT
GGAATCGAGTGTACGCAATTAATCTTGGACTTTTTCTTTGATTTCAATCGCGTCTTTGAGATTGATGATTTGTGGACCAACACT
TTGGGTGGCTATCTGGCTTGGCTCCTTTATAAACGATTACATAAAAACAAGGTAAGGAATTAA

4188.1 (SEQ. ID. NO. 331)
ATGAAGATTCCTCTCTTAACTTTTGCAAGGCATAAATTTGTTTATGTCTTGCTTACTTTGCTTTTTCTTGCTTTGGTTTATCGTG
ATGTTTTGATGACTTATTTCTTTTTTGATATTCATGCGCCCGATCTAGCTAAATTCGATGGACAAGCAATTAAAAATGACTTAT
TAAAATCAGCATTAGATTTTCGTATTCTCCAGTTCAATCTAGGTTTTTATCAATCATTTATTATTCCAATCATCATTGTTTTGCT

AGGTTTTCAATATATTGAGCTGAAAAATAAAGTTTTACGATTGAGTATTGGAAGAGAAGTGAGTTATCAAGGGTTAAAAAGA
AAGTTGACTTTGCAAGTTGCAAGTATCCCTTGTTTGATATATTTAGTGACTGTGCTGATAATTGCAATTATAACCTATTTCTTT
GGGACTTTTTCTCCTCTTGGATGGAATTCTCTATTTTCTGATGGAAGTGGTTTACAAAGACTCCTAGATGGAGAGATAAAAAG
CTATTTGTTCTTTACTTGTGTCCTACTAATCGGTATTTTCATCAATGCAATCTATTTTTTACAAATAGTTGATTATGTGGGGAAT
GTGACTCGTTCGGCAATCACCTATTTGATGTTTCTTTGGCTTGGTTCTATGCTGCTTTATAGTGCCTTGCCTTACTATATGGTTC
CTATGACGAGTTTGATGCAAGCTAGCTATGGGGATGTAAGTTTGATGAAACTCTTTACTCCTTATATCCTTTATATTGTCCCTT
ACATGGTGCTTGAAAAATATGAAGATAATGTTTAA

4188.2 (SEQ. ID. NO. 332)
ATGAAGATAATGTTTAAGAATTTTAACAATATTTTGCTAAATAGAAAGATTGTTTTACTACTTCGTATAGTTCTGATGATGAT
TTTGATAAACCATCTATTGTCAACAGCGGTTCAAAAGCAGGATGCTGTTATCTTTTTCAAGAGAGAATTGATTTCAATTTTTTC
CTATAATGACTATTCTGAAGCGAATTTAGAAATCCCCAAACTATTGTTAAACCTTTCGCTTTTCATGGTAGGATGGCTCTCTGT
CATTTTACTTGAAAGTGATTTGGCAGACCATTACCATCACTTGATTCGCTATCAATCAAGCTCCTTTTTCGATTATACAAGGA
AACGATTGGTTGTCATTTCTAAATTTTTTACTCAAGATTTGTTTGTCTGGTTTCTTGGTTTACTTCCTCTAGGAATTCATTTCAA
AACAGTCGCACTTTTCTTTTTACTTGCTCAGTTAATGATGTTGTACTTACTACTGTCTTATCTGATAGCACTGATTAGTGCGGG
CGCTGGTTTTTCCTTTTTTCTCTATTTTTTAGCATTTGTGGGACAAGAATGGATGATGGATCATATTGTAACAGTGTATTTAGT
ACTCTTAAGTTTATTAGTTATGTTGATTGTTAGTCGCTTGGAAGAGAAATTTAAGAAAGGATAA

4188.5 (SEQ. ID. NO. 333)
ATGGGCAAAGGAGAGATGGGCAAAGGAGTTATTGGCTTGGAGTTCGACTCAGAAGTATTGGTCAACAAGGCTCCAACCCTTC
AATTGGCAAATGGTAAAACAGCGACTTTCCTAACCCAGTATGATAGCAAGACCTTGTTGTTTGCAGTAGATAAGGAAGATAT
CGGACAGGAAATTATTGGTATAGCTAAAGGAAGCATCGAAAGTATGCATAATCTTCCTGTAAATCTAGCAGGTGCCAGAGTT
CCTGGCGGAGTAAATGGTAGCAAAGCAGCGGTGCATGAAGTTCCAGAATTTACAGGGGGAGTTAATGGTACAGAGCCAGCT
GTTCATGAAATCGCAGAGTATAAGGGATCTGATTCGCTTGTAACTCTTACTACAAAAAAAGATTATACTTACAAAGCTCCTCT
TGCTCAGCAGGCACTTCCTGAAACAGGAAACAAGGAGAGTGACCTCCTAGCTTCACTAGGACTAACAGCTTTCTTCCTTGGT
CTGTTTACGCTAGGGAAAAAGAGAGAACAATAA

4188.10 (SEQ. ID. NO. 334)
ATGTTTAAAGTTTTACAAAAAGTTGGAAAAGCTTTTATGTTACCTATAGCTATACTTCCTGCAGCAGGTCTACTTTTGGGGAT
TGGTGGTGCACTTTCAAACCCAACCACGATAGCAACTTATCCAATACTAGACAATAGTATTTTTCAATCAATATTCCAAGTAA
TGAGCTCTGCAGGAGAGGTTGTATTCAGTAATTTGTCACTACTTCTCTGTGTGGGATTATGTATTGGCTTAGCGAAACGAGAT
AAAGGAACCGCTGCGTTAGCAGGAGTAACTGGTTACTTAGTTATGACTGCAACGATCAAAGCTTTGGTAAAACTTTTTATGG
CAGAAGGATCTGCAATTGATACTGGAGTTATTGGAGCATTAGTTGTCGGAATAGTTGCCGTATATTTGCACAACCGATATAA
CAATATTCAATTACCTTCCGCTTTAGGATTCTTTGGAGGTTCACGCTTCGTTCCTATTGTTACATCGTTCTCTTCTATCTTGATT
GGCTTTGTCTTCTTTGTTATTTGGCCACCTTTCCAACAACTTCTTGTTTCTACAGGTGGATATATTTCTCAGGCGGGTCCAATT
GGAACTTTTCTATATGGATTTTTAATGAGACTTTCTGGAGCAGTAGGCTTACATCATATAATTTACCCTATGTTTTGGTATACT
GAACTTGGTGGTGTTGAAACTGTTGCAGGACAAACAGTGGTTGGAGCTCAAAAAATATTTTTTGCTCAATTAGCCGATTTGGC
CCATTCTGGATTATTTACAGAAGGAACAAGGTTTTTTGCAGGTCGTTTCTCAACAATGATGTTCGGTTTACCGGCTGCCTGTTT
AGCGATGTACCATAGTGTTCCTAAAAATCGTCGTAAAAAATACGCGGGTTTGTTTTTTGGAGTTGCTTTAACATCTTTTATTAC
CGGTATTACAGAACCAATTGAATTTATGTTTCTATTCGTCAGTCCGGTTCTATATGTTGTTCACGCATTCCTTGATGGTGTTAG
CTTCTTTATTGCAGACGTCTTAAATATTTCAATAGGAAACACATTTTCAGGAGGTGTAATCGATTTCACTTTATTTGGAATTTT
GCAGGGGAACGCTAAGACGAATTGGGTTCTTCAGATTCCATTTGGACTTATTTGGAGTGTTTTGTATTATATTATTTTTAGATG
GTTCATTACTCAATTCAACGTTCTAACGCCAGGGCGAGGAGAAGAAGTAGATTCTAAAGAAATTTCTGAATCCGCAGATTCA
ACTTCAAATACTGCAGATTATTTAAAACAGGATAGCCTACAAATTATCAGAGCCTTGGGTGGATCAAATAATATAGAAGATG
TAGATGCTTGTGTGACACGTTTACGTGTAGCTGTAAAAGAAGTTAATCAAGTTGATAAAGCACTTTTAAAACAAATTGGTGC
AGTTGATGTCTTAGAAGTGAAGGGTGGCATTCAAGCAATCTATGGAGCAAAAGCAATCTTATATAAAAATAGTATTAATGAA
ATTTTAGGTGTAGATGATTAA

4188.11 (SEQ. ID. NO. 335)
ATGAAATTTAGAAAATTAGCTTGTACAGTACTTGCGGGTGCTGCGGTTCTTGGTCTTGCTGCTTGTGGCAATTCTGGCGGAAG
TAAAGATGCTGCCAAATCAGGTGGTGACGGTGCCAAAACAGAAATCACTTGGTGGGCATTCCCAGTATTTACCCAAGAAAAA
ACTGGTGACGGTGTTGGAACTTATGAAAAATCAATCATCGAAGCGTTTGAAAAAGCAAACCCAGATATAAAAGTGAAATTG
GAAACCATCGACTTCAAGTCAGGTCCTGAAAAAATCACAACAGCCATCGAAGCAGGAACAGCTCCAGACGTACTCTTTGATG
CACCAGGACGTATCATCCAATACGGTAAAAACGGTAAATTGGCTGAGTTGAATGACCTCTTCACAGATGAATTTGTTAAAGA
TGTCAACAATGAAAACATCGTACAAGCAAGTAAAGCTGGAGACAAGGCTTATATGTATCCGATTAGTTCTGCCCCATTCTAC
ATGGCAATGAACAAGAAAATGTTAGAAGATGCTGGAGTAGCAAACCTTGTAAAAGAAGGTTGGACAACTGATGATTTTGAA
AAAGTATTGAAAGCACTTAAAGACAAGGGTTACACACCAGGTTCATTGTTCAGTTCTGGTCAAGGGGGAGACCAAGGAACA
CGTGCCTTTATCTCTAACCTTTATAGCGGTTCTGTAACAGATGAAAAAGTTAGCAAATATACAACTGATGATCCTAAATTCGT
CAAAGGTCTTGAAAAAGCAACTAGCTGGATTAAAGACAATTTGATCAATAATGGTTCACAATTTGACGGTGGGGCAGATATC
CAAAACTTTGCCAACGGTCAAACATCTTACACAATCCTTTGGGCACCAGCTCAAAATGGTATCCAAGCTAAACTTTTAGAAG
CAAGTAAGGTAGAAGTGGTAGAAGTACCATTCCCATCAGACGAAGGTAAGCCAGCTCTTGAGTACCTTGTAAACGGGTTTGC
AGTATTCAACAATAAAGACGACAAGAAAGTCGCTGCATCTAAGAAATTCATCCAGTTTATCGCAGATGACAAGGAGTGGGG
ACCTAAAGACGTAGTTCGTACAGGTGCTTTCCCAGTCCGTACTTCATTTGGAAAACTTTATGAAGACAAACGCATGGAAACA
ATCAGCGGCTGGACTCAATACTACTCACCATACTACAACACTATTGATGGATTTGCTGAAATGAGAACACTTTGGTTCCCAAT
GTTGCAATCTGTATCAAATGGTGACGAAAAACCAGCAGATGCTTTGAAAGCCTTCACTGAAAAAGCGAACGAAACAATCAA
AAAAGCTATGAAACAATAG

4188.12 (SEQ. ID. NO. 336)
ATGCAATCTACAGAAAAAAAACCATTAACAGCCTTTACTGTTATTTCAACAATCATTTTGCTCTTGTTGACTGTGCTGTTCATC
TTTCCATTCTACTGGATTTTGACAGGGGCATTCAAATCACAACCTGATACAATTGTTATTCCTCCTCAGTGGTTCCCTAAAATG
CCAACCATGGAAAACTTCCAACAACTCATGGTGCAGAACCCTGCCTTGCAATGGATGTGGAACTCAGTATTTATCTCATTGGT
AACCATGTTCTTAGTTTGTGCAACCTCATCTCTAGCAGGTTATGTATTGGCTAAAAAACGTTTCTATGGTCAACGCATTCTATT
TGCTATCTTTATCGCTGCTATGGCGCTTCCAAAACAAGTTGTCCTTGTACCATTGGTACGTATCGTCAACTTCATGGGAATCCA
TGATACTCTCTGGGCAGTTATCTTGCCTTTGATTGGATGGCCATTCGGTGTCTTCCTCATGAAACAGTTCAGTGAAAATATCCC
TACAGAGTTGCTTGAATCAGCTAAAATCGACGGTTGTGGTGAGATTCGTACCTTCTGGAGTGTAGCCTTCCCGATTGTGAAAC

CAGGGTTTGCAGCCCTTGCAATCTTTACCTTCATCAATACTTGGAATGACTACTTCATGCAATTGGTAATGTTGACTTCACGTA
ACAATTTGACCATCTCACTTGGGGTTGCGACCATGCAGGCTGAAATGGCAACCAACTATGGTTTGATTATGGCAGGAGCTGC
CCTTGCTGCTGTTCCAATCGTCACAGTCTTCCTAGTCTTCCAAAAATCCTTCACACAGGGTATTACTATGGGAGCGGTCAAAG
GATAA

4191.1 (SEQ. ID. NO. 337)
ATGAAAAAAACTTTTTTCTTACTGGTGTTAGGCTTGTTTTGCCTTCTTCCACTCTCTGTTTTTGCCATTGATTTCAAGATAAACT
CTTATCAAGGGGATTTGTATATTCATGCAGACAATACGGCAGAGTTTAGACAGAAGATAGTTTACCAGTTTGAGGAGGACTT
TAAGGGCCAAATCGTGGGACTTGGACGTGCTGGTAAGATGCCTAGCGGGTTTGACATTGACCCTCATCCAAAGATTCAGGCC
GCGAAAAACGGTGCAGAACTAGCAGATGTGACTAGCGAAGTAACAGAAGAAGCGGATGGTTATACTGTGAGAGTCTATAAT
CCAGGTCAGGAGGGCGACATAGTTGAAGTTGACCTCGTCTGGAACTTAAAAAATTTACTTTTCCTTTATGATGATATCGCTGA
ATTAAATTGGCAACCTCTGACAGATAGTTCAGAGTCTATTGAAAAGTTTGAATTTCATGTAAGGGGAGACAAGGGGGCTGAA
AAACTCTTTTTCCATACAGGGAAACTTTTTAGAGAGGGAACGATTGAAAAGAGTAACCTTGATTATACTATCCGTTTAGACA
ATCTTCCGGCTAAGCGTGGAGTTGAGTTGCATGCCTATTGGCCTCGGACCGATTTTGCTAGCGCTAGGGATCAGGGATTGAA
AGGGAATCGTTTAGAAGAGTTTAATAAGATAGAAGACTCGATTGTTAGAGAAAAAGATCAGAGTAAACAACTCGTTACTTG
GGTCCTCCCTTCGATCCTTTCCATCTCCTTGTTATTGAGTGTCTGCTTCTATTTTATTTATAGAAGAAAGACCACTCCTTCAGTC
AAATATGCCAAAAATCATCGTCTCTATGAACCACCAATGGAATTAGAGCCTATGGTTTTATCAGAAGCAGTCTACTCGACCTC
CTTGGAGGAAGTGAGTCCCTTGGTCAAGGGAGCTGGAAAATTCACCTTTGATCAACTTATTCAAGCTACCTTGCTAGATGTGA
TAGACCGTGGGAATGTCTCTATCATTTCAGAAGGAGATGCAGTTGGTTTGAGGCTAGTAAAAGAAGATGGTTTGTCAAGCTT
TGAGAAAGACTGCCTAAATCTAGCTTTTTCAGGTAAAAAAGAAGAAACTCTTTCCAATTTGTTTGCGGATTACAAGGTATCTG
ATAGTCTTTATCGTAGAGCCAAAGTTTCTGATGAAAAACGGATTCAAGCAAGAGGGCTTCAACTCAAATCTTCTTTTGAAGA
GGTATTGAACCAGATGCAAGAAGGAGTGAGAAAACGAGTTTCCTTCTGGGGGCTCCCAGATTATTATCGTCCTTTAACTGGT
GGGGAAAAGGCCTTGCAAGTGGGTATGGGTGCCTTGACTATCCTGCCCCTATTTATCGGATTTGGTTTGTTCTTGTACAGTTT
AGACGTTCATGGCTATCTTTACCTCCCTTTGCCAATACTTGGTTTTCTAGGGTTAGTTTTGTCTGTTTTCTATTATTGGAAGCTT
CGACTAGATAATCGTGATGGTGTTCTAAATGAAGCGGGAGCTGAGGTCTACTATCTCTGGACCAGTTTTGAAAATATGTTGC
GTGAGATTGCACGATTGGATCAGGCTGAACTGGAAAGTATTGTGGTCTGGAATCGCCTCTTGGTCTATGCGACCTTATTTGGC
TATGCGGACAAGGTTAGTCATTTGATGAAGGTTCATCAGATTCAAGTGGAAAATCCAGATATCAATCTCTATGTAGCTTATGG
CTGGCACAGTACGTTTTATCATTCAACAGCACAAATGAGCCATTATGCTAGTGTCGCAAATACAGCAAGCACCTACTCTGTAT
CTTCTGGAAGTGGAAGTTCTGGTGGTGGCTTCTCTGGAGGCGGAGGTGGCGGCAGTATCGGTGCCTTTTAA

4191.2 (SEQ. ID. NO. 338)
ATGAAAAAAGTAAGAAAGATATTTCAGAAGGCAGTTGCAGGACTGTGCTGTATATCTCAGTTGACAGCTTTTTCTTCGATAG
TTGCTTTAGCAGAAACGCCTGAAACCAGTCCAGCGATAGGAAAAGTAGTGATTAAGGAGACAGGCGAAGGAGGAGCGCTTC
TAGGAGATGCCGTCTTTGAGTTGAAAAACAATACGGATGGCACAACTGTTTCGCAAAGGACAGAGGCGCAAACAGGAGAAG
CGATATTTTCAAACATAAAACCTGGGACATACACCTTGACAGAAGCCCAACCTCCAGTTGGTTATAAACCCTCTACTAAACA
ATGGACTGTTGAAGTTGAGAAGAATGGTCGGACGACTGTCCAAGGTGAACAGGTAGAAAATCGAGAAGAGGCTCTATCTGA
CCAGTATCCACAAACAGGGACTTATCCAGATGTTCAAACACCTTATCAGATTATTAAGGTAGATGGTTCGGAAAAAAACGGA
CAGCACAAGGCGTTGAATCCGAATCCATATGAACGTGTGATTCCAGAAGGTACACTTTCAAAGAGAATTTATCAAGTGAATA
ATTTGGATGATAACCAATATGGAATCGAATTGACGGTTAGTGGGAAAACAGTGTATGAACAAAAAGATAAGTCTGTGCCGCT
GGATGTCGTTATCTTGCTCGATAACTCAAATAGTATGAGTAACATTCGAAACAAGAATGCTCGACGTGCGGAAAGAGCTGGT
GAGGCGACACGTTCTCTTATTGATAAAATTACATCTGATTCAGAAAATAGGGTAGCGCTTGTGACTTATGCTTCCACTATCTT
TGATGGGACCGAGTTTACAGTAGAAAAAGGGGTAGCAGATAAAAACGGAAAGCGATTGAATGATTCTCTTTTTTGGAATTAT
GATCAGACGAGTTTTACAACCAATACCAAAGATTATAGTTATTTAAAGCTGACTAATGATAAGAATGACATTGTAGAATTAA
AAAATAAGGTACCTACCGAGGCAGAAGACCATGATGGAAATAGATTGATGTACCAATTCGGTGCCACTTTTACTCAGAAAGC
TTTGATGAAGGCAGATGAGATTTTGACACAACAAGCGAGACAAAATAGTCAAAAAGTCATTTTCCATATTACGGATGGTGTC
CCAACTATGTCGTATCCGATTAATTTTAATCATGCTACGTTTGCTCCATCATATCAAAATCAACTAAATGCATTTTTTAGTAAA
TCTCCTAATAAAGATGGAATACTATTAAGTGATTTTATTACGCAAGCAACTAGTGGAGAACATACAATTGTACGCGGAGATG
GGCAAAGTTACCAGATGTTTACAGATAAGACAGTTTATGAAAAAGGTGCTCCTGCAGCTTTCCCAGTTAAACCTGAAAAATA
TTCTGAAATGAAGGCGGCTGGTTATGCAGTTATAGGCGATCCAATTAATGGTGGATATATTTGGCTTAATTGGAGAGAGAGT
ATTCTGGCTTATCCGTTTAATTCTAATACTGCTAAAATTACCAATCATGGTGACCCTACAAGATGGTACTATAACGGGAATAT
TGCTCCTGATGGGTATGATGTCTTTACGGTAGGTATTGGTATTAACGGAGATCCTGGTACGGATGAAGCAACGGCTACTAGTT
TTATGCAAAGTATTTCTAGTAAACCTGAAAACTATACCAATGTTACTGACACGACAAAAATATTGGAACAGTTGAATCGTTA
TTTCCACACCATCGTAACTGAAAAGAAATCAATTGAGAATGGTACGATTACAGATCCGATGGGTGAGTTAATTGATTTGCAA
TTGGGCACAGATGGAAGATTTGATCCAGCAGATTACACTTTAACTGCAAACGATGGTAGTCGCTTGGAGAATGGACAAGCTG
TAGGTGGTCCACAAAATGATGGTGGTTTGTTAAAAAATGCAAAAGTGCTCTATGATACGACTGAGAAAAGGATTCGTGTAAC
AGGTCTGTACCTTGGAACGGATGAAAAAGTTACGTTGACCTACAATGTTCGTTTGAATGATGAGTTTGTAAGCAATAAATTTT
ATGATACCAATGGTCGAACAACCTTACATCCTAAGGAAGTAGAACAGAACACAGTGCGCGACTTCCCGATTCCTAAGATTCG
TGATGTGCGGAAGTATCCAGAAATCACAATTTCAAAAGAGAAAAAACTTGGTGACATTGAGTTTATTAAGGTCAATAAAAAT
GATAAAAAACCACTGAGAGGTGCGGTCTTTAGTCTTCAAAAACAACATCCGGATTATCCAGATATTTATGGAGCTATTGATC
AAAATGGCACTTATCAAAATGTGAGAACAGGTGAAGATGGTAAGTTGACCTTTAAAAATCTGTCAGATGGGAAATATCGATT
ATTTGAAAATTCTGAACCAGCTGGTTATAAACCCGTTCAAAATAAGCCTATCGTTGCCTTCCAAATAGTAAATGGAGAAGTC
AGAGATGTGACTTCAATCGTTCCACAAGATATACCAGCGGGTTACGAGTTTACGAATGATAAGCACTATATTACCAATGAAC
CTATTCCTCCAAAGAGAGAATATCCTCGAACTGGTGGTATCGGAATGTTGCCATTCTATCTGATAGGTTGCATGATGATGGGA
GGAGTTCTATTATACACACGGAAACATCCGTAA

4191.3 (SEQ. ID. NO. 339)
ATGAAATCAATCAACAAATTTTTAACAATGCTTGCTGCCTTATTACTGACAGCGAGTAGCCTGTTTTCAGCTGCAACAGTTTT
TGCGGCTGGGACGACAACAACATCTGTTACCGTTCATAAACTATTGGCAACAGATGGGGATATGGATAAAATTGCAAATGAG
TTAGAAACAGGTAACTATGCTGGTAATAAAGTGGGTGTTCTACCTGCAAATGCAAAAGAAATTGCCGGTGTTATGTTCGTTT
GGACAAATACTAATAATGAAATTATTGATGAAAATGGCCAAACTCTAGGAGTGAATATTGATCCACAAACATTTAAACTCTC
AGGGGCAATGCCGGCAACTGCAATGAAAAAATTAACAGAAGCTGAAGGAGCTAAATTTAACACGGCAAATTTACCAGCTGC
TAAGTATAAAATTTATGAAATTCACAGTTTATCAACTTATGTCGGTGAAGATGGAGCAACCTTAACAGGTTCTAAAGCAGTTC
CAATTGAAATTGAATTACCATTGAACGATGTTGTGGATGCGCATGTGTATCCAAAAAATACAGAAGCAAAGCCAAAAATTGA

TAAAGATTTCAAAGGTAAAGCAAATCCAGATACACCACGTGTAGATAAAGATACACCTGTGAACCACCAAGTTGGAGATGTT
GTAGAGTACGAAATTGTTACAAAAATTCCAGCACTTGCTAATTATGCAACAGCAAACTGGAGCGATAGAATGACTGAAGGTT
TGGCATTCAACAAAGGTACAGTGAAAGTAACTGTTGATGATGTTGCACTTGAAGCAGGTGATTATGCTCTAACAGAAGTAGC
AACTGGTTTTGATTTGAAATTAACAGATGCTGGTTTAGCTAAAGTGAATGACCAAAACGCTGAAAAAACTGTGAAAATCACT
TATTCGGCAACATTGAATGACAAAGCAATTGTAGAAGTACCAGAATCTAATGATGTAACATTTAACTATGGTAATAATCCAG
ATCACGGGAATACTCCAAAGCCGAATAAGCCAAATGAAAACGGCGATTTGACATTGACCAAGACATGGGTTGATGCTACAG
GTGCACCAATTCCGGCTGGAGCTGAAGCAACGTTCGATTTGGTTAATGCTCAGACTGGTAAAGTTGTACAAACTGTAACTTTG
ACAACAGACAAAAATACAGTTACTGTTAACGGATTGGATAAAAATACAGAATATAAATTCGTTGAACGTAGTATAAAAGGG
TATTCAGCAGATTATCAAGAAATCACTACAGCTGGAGAAATTGCTGTCAAGAACTGGAAAGACGAAAATCCAAAACCACTT
GATCCAACAGAGCCAAAAGTTGTTACATATGGTAAAAAGTTTGTCAAAGTTAATGATAAAGATAATCGTTTAGCTGGGGCAG
AATTTGTAATTGCAAATGCTGATAATGCTGGTCAATATTTAGCACGTAAAGCAGATAAAGTGAGTCAAGAAGAGAAGCAGTT
GGTTGTTACAACAAAGGATGCTTTAGATAGAGCAGTTGCTGCTTATAACGCTCTTACTGCACAACAACAAACTCAGCAAGAA
AAAGAGAAAGTTGACAAAGCTCAAGCTGCTTATAATGCTGCTGTGATTGCTGCCAACAATGCATTTGAATGGGTGGCAGATA
AGGACAATGAAAATGTTGTGAAATTAGTTTCTGATGCACAAGGTCGCTTTGAAATTACAGGCCTTCTTGCAGGTACATATTAC
TTAGAAGAAACAAAACAGCCTGCTGGTTATGCATTACTAACTAGCCGTCAGAAATTTGAAGTCACTGCAACTTCTTATTCAGC
GACTGGACAAGGCATTGAGTATACTGCTGGTTCAGGTAAAGATGACGCTACAAAAGTAGTCAACAAAAAAATCACTATCCC
ACAAACGGGTGGTATTGGTACAATTATCTTTGCTGTAGCGGGGGCTGCGATTATGGGTATTGCAGTGTACGCATATGTTAAA
AACAACAAAGATGAGGATCAACTTGCTTAA

4191.4 (SEQ. ID. NO. 340)
ATGACAATGCAGAAAATGCAGAAAATGATTAGTCGTATCTTCTTTGTTATGGCTCTGTGTTTTTCTCTTGTATGGGGTGCACA
TGCAGTCCAAGCGCAAGAAGATCACACGTTGGTCTTGCAATTGGAGAACTATCAGGAGGTGGTTAGTCAATTGCCATCTCGT
GATGGTCATCGGTTGCAAGTATGGAAGTTGGATGATTCGTATTCCTATGATGATCGGGTGCAAATTGTAAGAGACTTGCATTC
GTGGGATGAGAATAAACTTTCTTCTTTCAAAAAGACTTCGTTTGAGATGACCTTCCTTGAGAATCAGATTGAAGTATCTCATA
TTCCAAATGGTCTTTACTATGTTCGCTCTATTATCCAGACGGATGCGGTTTCTTATCCAGCTGAATTTCTTTTTGAAATGACAG
ATCAAACGGTAGAGCCTTTGGTCATTGTAGCGAAAAAAACAGATACAATGACAACAAAGGTGAAGCTGATAAAGGTGGATC
AAGACCACAATCGCTTGGAGGGTGTCGGCTTTAAATTGGTATCAGTAGCAAGAGATGTTTCTGAAAAAGAGGTTCCCTTGAT
TGGAGAATACCGTTACAGTTCTTCTGGTCAAGTAGGGAGAACTCTCTATACTGATAAAAATGGAGAGATTTTTGTGACAAAT
CTTCCTCTTGGGAACTATCGTTTCAAGGAGGTGGAGCCACTGGCAGGCTATGCTGTTACGACGCTGGATACGGATGTCCAGCT
GGTAGATCATCAGCTGGTGACGATTACGGTTGTCAATCAGAAATTACCACGTGGCAATGTTGACTTTATGAAGGTGGATGGT
CGGACCAATACCTCTCTTCAAGGGGCAATGTTCAAAGTCATGAAAGAAGAAAGCGGACACTATACTCCTGTTCTTCAAAATG
GTAAGGAAGTAGTTGTAACATCAGGGAAAGATGGTCGTTTCCGAGTGGAAGGTCTAGAGTATGGGACATACTATTTATGGGA
GCTCCAAGCTCCAACTGGTTATGTTCAATTAACATCGCCTGTTTCCTTTACAATCGGGAAAGATACTCGTAAGGAACTGGTAA
CAGTGGTTAAAAATAACAAGCGACCACGGATTGATGTGCCAGATACAGGGGAAGAAACCCTTGTATATCTTGATGCTTGTTG
CCATTTTGTTGTTTGGTAG

4191.5 (SEQ. ID. NO. 341)
ATGAGCCACATATACTTATCTATTTTCACAAGTCTCTTGCTGATGCTAGGACTTGTCAATGTTGCTCAAGCCGATGAATATTTA
CGCATCGGTATGGAAGCAGCATATGCTCCCTTTAACTGGACCCAGGATGATGATAGCAACGGAGCTGTCAAAATCGATGGGA
CCAATCAGTATGCCAACGGATACGATGTTCAAATCGCCAAGAAAATCGCTAAGGACTTAGGTAAAGAACCTTTGGTTGTTAA
AACCAAGTGGGAAGGTCTAGTCCCTGCCCTTACTTCTGGTAAGATTGACATGATTATCGCAGGTATGAGTCCAACTGCAGAA
CGCAAACAAGAAATTGCCTTTTCGAGCAGTTACTATACTAGCGAACCAGTTTTGCTTGTCAAAAAAGATTCTGCCTACGCAA
GTGCTAAATCTTTGGATGACTTTAACGGTGCAAAAATCACTTCTCAACAAGGGGTCTACCTTTATAACTTGATTGCACAAATC
CCAGGTGCTAAAAAAGAAACAGCCATGGGAGACTTCGCTCAAATGCGACAAGCTCTTGAGGCTGGTGTCATTGATGCTTATG
TTTCTGAACGTCCAGAAGCACTGACTGCTGAAGCTGCGAACTCTAAGTTCAAGATGATTCAAGTAGAACCTGGTTTCAAAAC
TGGGGAAGAAGATACAGCTATCGCTATCGGGCTTCGTAAAAATGACAATCGTATTAGCCAAATCAATGCCAGCATTGAAACC
ATTTCAAAAGATGACCAAGTTGCCTTGATGGATCGTATGATCAAGGAACAACCTGCCGAAGCTACAACAACTGAAGAGACTA
GCAGTAGTTTCTTTAGCCAAGTTGCTAAAATTCTTTCTGAAAACTGGCAACAACTCTTGCGTGGTGCTGGTATCACTCTTTTAA
TCTCTATCGTCGGAACCATCATAGGTCTCATTATTGGACTTGCCATTGGTGTCTTCCGTACTGCTCCTCTCTCTGAAAACAAAG
TCATTTACGGCCTACAAAAACTAGTCGGCTGGGTTCTCAATGTCTACATTGAAATTTTCCGTGGTACGCCAATGATTGTTCAA
TCGATGGTTATCTACTATGGAACTGCCCAAGCTTTCGGGATCAACC
TTGACCGTACACTGGCTGCTATCTTCATCGTTTCAATCAATACCGGTGCCTACATGACTGAAATCGTCCGTGGTGGTATCCTA
GCAGTTGACAAGGGACAATTTGAAGCTGCGACTGCTCTTGGTATGACCCATAACCAGACCATGCGTAAGATTGTCCTACCTC
AGGTAGTCCGTAACATCCTACCTGCAACTGGTAATGAATTTGTCATCAATATCAAAGATACATCTGTATTGAACGTTATCTCT
GTTGTCGAACTTTATTTCTCAGGAAATACCGTGGCAACACAAACCTATCAATACTTCCAGACATTTACAATCATCGCCGTGAT
TTACTTTGTCCTCACCTTCACCGTAACACGTATCCTACGCTTTATCGAGCGCAGAATGGACATGGATACCTACACTACAGGTG
CTAACCAAATGCAAACGGAGGATTTGAAATAA

4191.6 (SEQ. ID. NO. 342)
ATGACACAAGCAATCCTTGAAATTAAACACCTCAAAAAATCCTATGGACAAAACGAAGTGCTAAAAGACATTTCACTCACTG
TCCACAAGGGAGAGGTCATCTCTATCATCGGAAGCTCTGGAAGCGGAAAATCGACCTTCCTACGCTCCATTAACCTACTTGA
AACACCAACTGATGGACAAATCCTTTATCATGGACAAAACGTCCTCGAAAAAGGCTATGACCTCACGCAATACCGTGAAAAG
TTGGGGATGGTTTTCCAATCCTTTAACCTCTTTGAAAATCTCAATGTTCTTGAAAACACAATCGTCGCTCAGACAACTGTCCT
AAAACGCGAACGCACAGAAGCTGAAAAGATTGCCAAAGAAAACCTGGAAAAGGTCGGCATGGGAGAACGCTACTGGCAAG
CCAAACCAAAACAACTCTCAGGTGGTCAAAAACAACGTGTGGCCATCGCTCGTGCCCTCTCCATGAATCCGGACGCTATTCT
CTTTGATGAACCAACATCAGCTCTCGATCCAGAAATGGTTGGAGAAGTCCTCAAAATCATGCAGGACCTGGCTCAGGAAGGC
TTGACCATGATTGTCGTAACCCATGAAATGGAATTTGCCCGTGATGTCTCTCACCGTGTTATCTTTATGGATAAGGGCGTGAT
CGCTGAAGAAGGTAAACCAGAAGACCTCTTCACCAATCCTAAAGAAGACCGAACAAAAGAGTTCCTTCAACGCTATCTCAA
ATAA

4192.3 (SEQ. ID. NO. 343)
ATGAAAAAGTATCAACTTCTATTCAAAATAAGTGCAGTCTTCTCTTACTTATTTTTCGTATTTAGTCTTTCTCAGCTGACGCTT
ATCGTCCAAAACTATTGGCAATTTTCTTCTCAGATAGGCAATTTATTCTGGATTCAAAATATCTTGAGTTTACTTTTTATTGGA
GTCATGATTGTGGTTCTTGTTAAGACAGGCCATGGTTATCTCTTCCGCATTCCAAGAAAAAAATGGCTTTGGTATTCGATTTT
GACAGTATTAGTGCTAGTGTTCCAGATCTCTTTTAACGTTCAGACAGCTAAACATGTTCAGTCAACTGCGGAAGGTTGGGCTG

TATTGATTGGTTATAGTGGGACTAACTTTGCAGAGCTAGGTATTTATATAGCCCTGTTCTTTCTGGTTCCACTGATGGAAGAA
TTGATTTATAGAGGATTACTGCAACATGCTTTCTTTAAGCATTCGCGATTTGGTCTTGATTTGCTTCTTCCTTCTATTTTATTTG
CTCTCCCTCATTTTTCAAGCCTGCCTAGTCTGTTAGATATCTTCGTCTTTGCAACAGTTGGAATCATCTTTGCTGGTTTGACCC
GCTATACCAAGAGCATTTATCCATCCTATGCGGTGCATGTGATCAATAATATTGTAGCGACCTTCCCGTTTTTGCTCACTTTTC
TACATAGGGTCTTGGGGTAA

4193.1 (SEQ. ID. NO. 344)
ATGAACAAGAAACAATGGCTAGGTCTTGGCCTAGTTGCAGTGGCAGCAGTTGGACTTGCTGCATGTGGTAACCGCTCTTCTC
GTAACGCAGCTTCATCTTCTGATGTGAAGACAAAAGCAGCAATCGTCACTGATACTGGTGGTGTTGATGACAAATCATTCAA
CCAATCAGCTTGGGAAGGTTTGCAGGCTTGGGGTAAAGAACACAATCTTTCAAAAGATAACGGTTTCACTTACTTCCAATCA
ACAAGTGAAGCTGACTACGCTAACAACTTGCAACAAGCGGCTGGAAGTTACAACCTAATCTTCGGTGTTGGTTTTGCCCTTA
ATAATGCAGTTAAAGATGCAGCAAAAGAACACACTGACTTGAACTATGTCTTGATTGATGATGTGATTAAAGACCAAAAGAA
TGTTGCGAGCGTAACTTTCGCTGATAATGAGTCAGGTTACcTTGCAGGTGTGGCTGCAGCAAAAACAACTAAGACAAAACAA
GTTGGTTTTGTAGGTGGTATCGAATCTGAAGTTATCTCTCGTTTTGAAGCAGGATTCAAGGCTGGTGTTGCGTCAGTAGACCC
ATCTATCAAAGTCCAAGTTGACTACGCTGGTTCATTTGGTGATGCGGCTAAAGGTAAAACAATTGCAGCCGCACAATACGCA
GCCGGTGCAGATATTGTTTACCAAGTAGCTGGTGGTACAGGTGCAGGTGTCTTTGCAGAGGCAAAATCTCTCAACGAAAGCC
GTCCTGAAAATGAAAAAGTTTGGGTTATCGGTGTTGATCGTGACCAAGAAGCAGAAGGTAAATACACTTCTAAAGATGGCAA
AGAATCAAACTTTGTTCTTGTATCTACTTTGAAACAAGTTGGTACAACTGTAAAAGATATTTCTAACAAGGCAGAAAGAGGA
GAATTCCCTGGCGGTCAAGTGATCGTTTACTCATTGAAGGATAAAGGGGTTGACTTGGCAGTAACAAACCTTTCAGAAGAAG
GTAAAAAAGCTGTCGAAGATGCAAAAGCTAAAATCCTTGATGGAAGCGTAAAAGT
TCCTGAAAAATAA

4193.3 (SEQ. ID. NO. 345)
ATGTCTAAAAAATTACAACAAATTTCGGTTCCCTTGATTTCTGTATTCCTAGGAATTTTACTCGGAGCCATTGTCATGTGGATC
TTCGGTTATGATGCTATTTGGGGCTACGAAGAATTGTTCTATACAGCCTTTGGCAGTCTGCGTGGGATTGGAGAAATCTTCCG
TGCTATGGGTCCTCTGGTCTTGATTGGTCTTGGTTTTGCCGTTGCCAGTCGAGCTGGTTTCTTTAACGTCGGACTTCCTGGTCA
GGCTTTGGCAGGTTGGATTCTCAGTGGTTGGTTTGCCCTGTCGCATCCAGATATGCCCCGTCCCTTGATGATTCTAGCAACCA
TCGTGATTGCCTTGATTGCTGGTGGGATTGTCGGAGCGATTCCAGGTATTCTTAGGGCCTATCTAGGGACGTCAGAGGTTATT
GTAACCATCATGATGAACTACATTGTCTTGTATGTAGGGAATGCCTTTATCCATGCTTTCCCTAAAGACTTCATGCAAAGTAC
AGATTCGACCATTCGTGTTGGGGCTAATGCAACCTATCAGACACCTTGGTTGGCTGAGTTGACTGGTAACTCACGGATGAAT
ATTGGTATTTTCTTTGCCATCATTGCCGTTGCAGTTATTTGGTTCATGCTCAAGAAAACAACTCTTGGTTTTGAAATCCGTGCA
GTTGGTCTTAATCCACATGCTTCAGAATATGCTGGTATTTCTGCCAAGCGGACTATTATCCTATCTATGATTATTTCAGGTGCC
TTGGCAGGTCTTGGTGGAGCTGTTGAAGGTTTGGGAACCTTCCAGAACGTCTATGTTCAAGGTTCGTCATTAGCTATCGGATT
TAACGGAATGGCGGTTAGTTTGCTTGCGGCCAACTCACCAATTGGTATACTCTTTGCAGCCTTCCTATTTGGCGTTCTCCAAGT
TGGGGCTCCTGGTATGAATGCGGCGCAGGTACCATCTGAGCTTGTCAGCATTGTAACAGCGTCTATTATCTTCTTTGTCAGTG
TTCATTACCTTATCGAACGCTTTGTCAAACCGAAAAAACAAGTTAAAGGAGGTAAGTAA

4194.1 (SEQ. ID. NO. 346)
ATGGGAGTGAAAAAGAAACTAAAGTTGACTAGTTTGCTAGGACTGTCTCTGTTAATCATGACAGCCTGTGCGACTAATGGGG
TAACTAGCGATATTACAGCCGAATCGGCTGATTTTTGGAGTAAATTGGTTTACTTCTTTGCGGAAATCATTCGCTTTTTATCGT
TTGATATTAGTATCGGAGTGGGGATTATTCTCTTTACGGTCTTGATTCGTACAGTCCTCTTGCCAGTCTTTCAGGTGCAAATGG
TGGCTTCTAGGAAAATGCAGGAAGCTCAGCCACGCATTAAGGCGCTTCGAGAACAATATCCAGGTCGAGATATGGAAAGCA
GAACCAAACTAGAGCAGGAAATGCGTAAAGTATTTAAAGAAATGGGTGTCAGACAGTCAGACTCTCTTTGGCCGATTTTGAT
TCAGATGCCGGTTATTTTGGCCCTGTTCCAAGCCCTATCAAGAGTTGACTTTTTAAAGACAGGTCATTTCTTATGGATTAACCT
TGGTAGTGTGGATACAACCCTTGTTCTTCCGATTTTAGCAGCAGTATTCACCTTTTTAAGTACTTGGTTGTCCAACAAAGCTTT
GTCTGAGCGAAATGGCGCTACGACTGCGATGATGTATGGGATTCCAGTCTTGATTTTTATCTTTGCAGTTTATGCGCCAGGTG
GAGTCGCCCTATACTGGACAGTGTCTAATGCTTATCAAGTCTTGCAAACCTATTTCTTGAATAATCCATTCAAGATTATCGCA
GAGCGCGAGGCCGTAGTACAGGCACAAAAAGATTTGGAAAATAGAAAAAGAAAAGCCAAGAAAAAGGCTCAGAAAACGAA
ATAA

4194.4 (SEQ. ID. NO. 347)
ATGGTTATCGATCCATTTGCTATCAACGAACTAGACTATTACTTAGTTTCACACTTCCACAGTGATCATATCGACCCATACAC
AGCTGCAGCAATTCTCAATAATCCTAAGTTAGAGCATGTTAAGTTTATCGGTCCTTACCACTGTGGACGAATCTGGGAAGGAT
GGGGTGTTCCAAAAGAACGTATCATCGTTGTTAAACCAGGTGACACTATCGAATTAAAAGATATGAAGATTCATGCAGTAGA
ATCATTTGACCGTACTTGCTTGGTAACTCTCCCAGTGAACGGTGCTGATGAGACAGGCGGTGAACTTGCTGGCTTGGCTGTTA
CAGATGAAGAAATGGCTCAAAAGGCTGTTAACTATATCTTTGAAACACCAGGTGGAACCATCTATCATGGTGCAGATTCTCA
CTTCTCAAACTATTTTGCAAAACATGGTAAAGACTTTAAAATTGATGTTGCTTTGAATAACTATGGTGAAAATCCGGTAGGTA
TCCAAGACAAAATGACATCTATCGACCTTCTTCGTATGGCAGAAAATCTGCGTACCAAAGTCATTATCCCAGTTCACTATGAT
ATCTGGTCTAACTTCATGGCTTCTACTAATGAGATTCTAGAACTTTGGAAAATGCGAAAAGATCGCTTGCAATACGATTTCCA
TCCATTTATCTGGGAAGTTGGCGGTAAGTACACTTATCCTCAAGATCAACACTTAGTAGAATACCATCATCCACGTGGTTTTG
ATGATTGTTTTGAACAAGACTCTAACATTCAATTTAAAGCTTTGCTATAA

4196.2 (SEQ. ID. NO. 348)
ATGTTCCTTTCAGGCTGGTTGTCTAGTTTTGCTAATACTTATATCCATGATTTACTGGGGGTTCTTTTCCCAGATAGTCCATTTT
TAAATGCCTTTGAAAGTGCTATTGCGGCTCCTTTGGTAGAAGAACCCTTGAAATTATTGTCACTTGTTTTTGTTTTGGCTTTGA
TTCCTGTGCGAAAATTAAAATCTTTGTTTTTACTTGGAATTGCTTCCGGTTTGGGATTCCAAATGATTAAGGATATTGGTTATA
TTCGTACGGATTTGCCAGAGGGCTTTGACTTTACTATTTCGCGAATTTTAGAGCGTATCATCTCAGGAATTGCCTCTCACTGG
ACTTTTTCAGGTCTAGCTGTAGTAGGTGTTTACTTGCTTTACAGAGCCTATAAAGGACAGAAGGTTGGCAAGAAACAGGGCC
TTATTTTTCTAGGTTTAGCCTTGGGAACTCACTTCTTGTTTAACTCTCCTTTTGTGGAGTTGGAAACAGAGTTGCCTTTAGCGA
TTCCAGTGGTTACGGCTATTGCTCTCTATGGTTTTTATCATGCTTATTGCTTTGTTGAGAAACACAATGAGTTGATGACCTAG

4197.1 (SEQ. ID. NO. 349)

ATGAAGGTGGAACCACGTTGCGACGTCCTTTCGAGGATGTCGCATTTTTTTATTAGGATACTAATTATGGAGTTGCAAGAATT
AGTGGAGCGCAGTTGGGCAATCCGACAAGCTTATCACGAACTGGAAGTTAAGCATCATGATTCCAAGTGGACGGTAGAAGA
AGACCTCTTGGCTTTATCTAATGATATTGGAAATTTCCAACGACTGGTGATGACAAAGCAAGGACGCTACTATGATGAAACA
CCCTACACACTGGAACAAAAACTTTCAGAAAATATCTGGTGGCTATTAGAACTTTCTCAACGTTTGGATATAGACATTCTGAC
GGAAATGGAAAACTTCCTCTCTGATAAAGAAAAGCAATTGAACGTTAGGACTTGGAAGTAG

4197.4 (SEQ. ID. NO. 350)
ATGCTTGATTGGAAACAATTTTTTCTAGCCTATCTGCGCTCCCGTAGTCGTCTTTTTATCTATCTGCTTTCTTTGGCATTTCTTG
TCTTACTCTTTCAGTTTTTATTTGCCAGTCTAGGAATTTACTTCCTCTACTTTTTCTTCTTGTGTTGCTTTGTAACCATATTATTT
TTCACTTGGGACATATTGGTGGAAACGCAGGTCTATCGCCAGGAACTTCTCTATGGAGAGAGGGAAGCCAAGTCTCCTTTGG
AAATAGCTTTAGCAGAAAAATTAGAAGCGCGTGAGATGGAACTCTATCAGCAGAGGTCAAAAGCAGAAAGAAAACTGACGG
ATTTGCTGGATTACTATACCTTGTGGGTCCATCAGATAAAGACCCCCATTGCAGCCAGTCAACTCTTAGTTGCAGAAGTGGTC
GACCGCCAACTGAAGCAGCAGCTAGAACAGGAAATTTTCAAAATCGACTCCTATACCAACCTAGTTTTACAGTACCTGCGTT
TAGAAAGTTTCCATGATGATTTGGTCTTAAAGCAGGTTCAAATTGAGGACTTGGTCAAGGAAATAATTCGTAAATATGCTCTT
TTCTTTATTCAAAAAGGCTTAAATGTCAATCTACATGACCTTGATAAAGAAATCGTGACGGATAAAAAGTGGCTGCTAGTGG
TTATTGAGCAAATCATCTCAAACAGTCTCAAGTACACCAAGGAAGGTGGTCTGGAGATTTATATGGATGACCAAGAGCTTTG
TATCAAAGATACGGGAATCGGGATAAAAAACAGTGATGTCCTCCGAGTATTTGAACGTGGCTTTTCAGGATACAATGGCCGT
TTGACCCAGCAGTCCTCTGGACTTGGCCTTTATCTATCTAAGAAAATTTCTGAAGAACTGGGGCACCAGATTCGTATCGAGTC
TGAGGTCGGAAAAGGAACGACAGTGCGGATTCAGTTTGCTCAAGTGAACTTAGTCCTTGAGTAA

4211.2 (SEQ. ID. NO. 351)
ATGGAACTTAATACACACAATGCTGAAATCTTGCTCAGTGCAGCTAATAAGTCCCACTATCCGCAGGATGAACTGCCAGAGA
TTGCCCTAGCAGGGCGTTCAAATGTTGGTAAATCCAGCTTTATCAACACTATGTTGAACCGTAAGAATCTCGCCCGTACATCA
GGAAAACCTGGTAAAACCCAGCTCCTGAACTTTTTTAACATTGATGACAAGATGCGCTTTGTGGATGTGCCTGGTTATGGCTA
TGCTCGTGTTTCTAAAAAGGAACGTGAAAAGTGGGGGTGCATGATTGAGGAGTACTTAACGACTCGGGAAAATCTCCGTGCG
GTTGTCAGTCTAGTTGACCTTCGTCATGACCCGTCAGCAGATGATGTGCAGATGTACGAATTTCTCAAGTATTATGAGATTCC
AGTCATCATTGTGGCGACCAAGGCGGACAAGATTCCTCGTGGTAAATGGAACAAGCATGAATCAGCAATCAAAAAGAAATT
AAACTTTGACCCGAGTGACGATTTCATCCTCTTTTCATCTGTCAGTAAGGCAGGGATGGATGAGGCTTGGGATGCAATCTTAG
AAAAATTGTGA

4211.3 (SEQ. ID. NO. 352)
ATGACAAAGAAACAACTTCACTTGGTGATTGTGACAGGGATGAGTGGCGCAGGGAAAACTGTAGCCATTCAGTCCTTCGAGG
ATCTAGGTTATTTCACCATTGATAATATGCCGCCAGCTCTCTTGCCTAAGTTTTTGCAGCTGGTTGAAATTAAGGAAGACAAT
CCTAAGTTGGCCTTGGTAGTGGATATGCGTAGCCGTTCTTTCTTTTCAGAGATTCAAGCTGTTTTGGATGAGTTGGAAAATCA
AGATGGTTTGGATTTCAAAATCCTCTTTTTGGATGCGGCTGATAAGGAATTGGTCGCTCGTTACAAGGAAACCAGACGGAGT
CACCCACTAGCAGCAGACGGTCGTATTTTAGATGGAATCAAGTTGGAACGTGAACTCTTGGCACCTTTGAAAAATATGAGCC
AAAATGTGGTGGATACGACTGAACTCACTCCACGTGAGcTGCGCAAAACCCTTGCAGAGCAGTTTTCAGACCAAGAACAAGC
CCAGTCTTTCCGTATCGAAGTCATGTCTTTCGGATTTAAGTATGGAATCCCGATTGATGCGGACTTGGTCTTTGATGTCCGTTT
CTTGCCAAATCCCTATTATTTACCAGAACTGAGAAACCAAACGGGTGTGGATGAACCTGTTTATGATTATGTCATGAACCATC
CTGAGTCAGAAGACTTTTATCAACATTTATTGGCCTTGATTGAGCCGATTCTGCCAAGTTACCAAAAGGAAGGTAAGTCCGTT
TTGACCATTGCCATGGGATGTACGGGTGGACAACACCGTAGTGTGGCATTTGCTAAACGCTTGGCGCAGGACTTATCCAAGA
ATTGGTCTGTTAATGAAGGGCATCGCGACAAAGACCGCAGAAAGGAAACGGTAAACCGTTCATGA

4211.4 (SEQ. ID. NO. 353)
ATGAGAAAACCAAAGATAACGGTGATTGGTGGAGGGACTGGAAGTCCCGTCATTCTAAAAAGTCTGCGGGAAAAAGATGTG
GAAATCGCAGCTATCGTGACGGTGGCAGATGATGGTGGTTCTTCAGGTGAACTCCGAAAAAATATGCAACAGTTGACACCGC
CAGGTGATCTTCGTAATGTCCTTGTGGCCATGTCGGATATGCCTAAGTTTTATGAGAAGGTCTTTCAGTATCGGTTCTCTGAG
GATGCCGGAGCCTTTGCTGGCCATCCATTGGGAAATCTCATCATTGCTGGCTTGTCAGAAATGCAGGGTTCAACCTATAATGC
CATGCAGTTATTGAGCAAATTTTTCCATACAACAGGGAAAATTTATCCTTCCAGTGACCATCCTTTGACCCTTCATGCAGTCTT
TCAGGATGGGACAGAAGTGGCTGGAGAGAGTCATATTGTAGACCATCGAGGCATAATTGACAATGTCTATGTGACCAATGCC
CTAAACGATGATACGCCTCTGGCCAGCCGTCGAGTAGTGCAGACCATCCTTGAAAGTGACATGATTGTCCTAGGGCCAGGTT
CCCTCTTTACCTCTATTTTGCCCAATATCGTGATTAAGGAAATTGGGCGGGCTCTTTTGGAAACCAAGGCAGAAATTGCCTAT
GTCTGCAATATCATGACCCAACGTGGGGAGACGGAACACTTTACAGATAGCGACCACGTGGAAGTCTTGCATCGTCACCTTG
GTCGCCCTTTTATCGACACTGTCTTGGTGAATATTGAAAAAGTGCCTCAGGAATACATGAATTCCAACCGTTTTGATGAATAC
TTAGTGCAAGTGGAACACGATTTTGTAGGTCTTTGTAAGCAAGTTTCGCGCGTGATTTCATCTAACTTCCTTCGTCTGGAAAA
TGGCGGTGCCTTCCACGATGGAGATTTGATTGTGGACGAGTTGATGCGCATTATACAGGTGAAAAAATGA

4213.1 (SEQ. ID. NO. 354)
ATGAAAAATTTGATAAAGTTGCTAATAATTAGATTGATTGTTAACTTAGCAGACAGTGTATTTTATATAGTAGCATTGTGGCA
CGTTAGCAATAATTATTCTTCGAGCATGTTCTTAGGAATATTTATTGCAGTAAATTATCTACCGGATTTGTTACTAATCTTTTT
TGGACCAGTTATTGACAGAGTAAATCCGCAAAAAATTCTTATAATATCAATTTTGGTTCAATTAGCAGTGGCTGTAATATTTT
TATTATTATTAAACCAAATATCATTTTGGGTGATAATGAGTCTAGTGTTTATTTCAGTAATGGCTAGCTCCATAAGTTACGTG
ATAGAAGATGTGTTGATTCCTCAAGTGGTAGAATATGATAAGATTGTATTTGCAAATTCTCTTTTTAGTATTTCGTATAAAGT
ATTAGATTCTATTTTTAATTCATTCGCATCATTTTTACAGGTGGCAGTAGGATTTATTTTATTGGTTAAGATAGATATAGGCAT
ATTTTTACTTGCTCTATTTATATTGTTGTTGTTAAAATTTAGAACTAGCAATGCGAATATAGAAAACTTCTCTTTCAAATATTA
CAAGAGAGAAGTGTTGCAAGGTACAAAGTTTATTTTAAATAATAAATTATTATTTAAAACCAGTATTTCTTTAACGCTTATAA
ACTTTTTTTATTCATTTCAGACAGTAGTTGTACCGATTTTTTCTATTCGATATTTTGATGGTCCGATTTTTTATGGTATTTTTTTA
ACTATTGCTGGTTTGGGTGGTATATTGGGAAATATGCTAGCGCCAATCGTAATAAAATATTTAAAATCGAATCAAATTGTTGG
TGTATTTCTTTTTTTGAACGGCTCAAGTTGGTTAGTAGCAATTGTTATAAAAGACTATACTTTATCACTTATTTTATTTTTCGTT
TGTTTTATGTCTAAAGGAGTCTTCAATATTATTTTTAATTCGTTGTACCAACAAATACCTCCACATCAACTTCTTGGTAGGGTA
AATACTACCATTGATTCTATTATTTCTTTTGGAATGCCAATTGGTAGTTTAGTTGCAGGAACGCTTATTGATTTGAATATTGAA
TTAGTGTTAATTGCTATTAGCATACCTTATTTTTTGTTTTCTTATATTTTTTATACGGATAATGGATTGAAAGAATTTAGTATAT
ATTAG

4213.2 (SEQ. ID. NO. 355)

ATGATGTCTAACAAAAATAAGGAAATTCTGATTTTTGCGATTCTCTATACAGTCCTCTTTATGTTTGATGGCGTTAAATTGCTG
GCTTCTTTAATGCCATCTGCCATTGCAAATTATCTTGTTTATGTAGTTTTAGCTCTATATGGCTCCTTCTTGTTCAAGGATAGAT
TGATCCAACAATGGAAGGAGATTAGAAAGACTAAAAGAAAATTCTTCTTTGGAGTCTTAACAGGATGGCTCTTTCTCATTCT
GATGACTGTTGTCTTTGAATTTGTATCAGAGATGTTGAAGCAGTTTGTGGGACTAGATGGACAAGGTCTAAATCAGTCTAATA
TTCAAAGTACCTTTCAAGAACAACCACTACTGATAGCTGTTTTTGCTTGTGTCATTGGACCTCTGGTAGAAGAATTATTTTTCC
GTCAGGTCTTATTGCATTACTTGCAGGAACGGTTGTCAGGTTTACTAAGCATTATTCTGGTAGGACTTGTTTTTGCTCTGACTC
ATATGCACAGTTTGGCTCTATCAGAGTGGATTGGTGCAGTTGGTTACTTAGGTGGAGGCCTTGCCTTTTCTATTATTTATGTGA
AAGAAAAAGAGAATATCTACTATCCCCTACTTGTTCACATGTTAAGCAACAGCCTCTCCTTAATCATTTTAGCTATCAGTATA
GTAAAATGA

4224.1 (SEQ. ID. NO. 356)
TTGAAAAAGCCAATTATCGAATTCAAAAACGTCTCTAAAGTTTTTGAAGACAGCAACACCAAGGTTCTCAAAGACATCAACT
TTGAGTTGGAAGAAGGGAAATTCTACACCCTTCTAGGTGCATCTGGTTCGGGGAAATCAACTATCCTAAACATTATTGCAGG
TTTACTGGATGCGACGACAGGAGATATCATGCTAGACGGTGTTCGTATCAATGATATTCCAACCAACAAGCGCGACGTACAT
ACCGTCTTCCAATCCTATGCCTTGTTCCCACATATGAATGTGTTTGAAAATGTTGCCTTTCCACTTCGCTTGCGTAAAATTGAT
AAGAAAGAAATCGAGCAGCGTGTAGCGGAAGTTCTCAAGATGGTTCAGTTGGAAGGTTATGAAAAACGTTCCATCCGCAAA
CTTTCTGGAGGACAACGTCAGCGTGTGGCCATCGCCCGTGCTATCATCAACCAACCCCGTGTGGTCTTGTTGGACGAGCCTTT
ATCAGCGCTGGACTTGAAATTGAGAACAGACATGCAGTACGAATTGCGTGAATTACAACAACGATTGGGCATTACCTTTGTC
TTTGTCACTCACGATCAGGAAGAAGCTCTTGCCATGAGTGACTGGATTTTCGTTATGAATGATGGCGAGATTGTCCAGTCTGG
AACCCCTGTGGACATCTACGATGAGCCAATCAACCACTTTGTTGCCACCTTTATCGGGGAGTCAAACATCTTGCCAGGTACCA
TGATTGAGGACTACTTGGTCGAATTTAACGGCAAACGCTTTGAAGCGGTTGATGGTGGGATGAAGCCAAATGAACCTGTTGA
GGTCGTTATTCGTCCAGAGGACTTGCGCATTACCCTTCCTGAAGAAGGCAAGCTCCAAGTTAAGGTCGATACCCAGCTTTTCC
GTGGAGTTCATTATGAAATTATCGCCTATGACGAACTTGGAAATGAATGGATGATCCACTCAACCCGTAAGGCTATCGTGGG
TGAGGAAATCGGTCTGGACTTTGAACCAGAAGACATCCACATCATGCGTCTCAATGAAACCGAAGAAGAGTTCGATGCTCGT
ATTGAGGAGTACGTAGAAATCGAAGAGCAAGAAGCAGGTTTGATCAATGCAATCGAGGAGGAAAGAGATGAAGAAAACAA
GCTCTAA

4252.1 (SEQ. ID. NO. 357)
ATGAAATCAATGAGAATCTTATTTTTGTTAGCTTTAATTCAAATCAGTTTGAGTAGCTGTTTCCTATGGAAGGAATGCATCTT
GTCCTTTAAACAAAGTACAGCTTTTTTCATCGGAAGCATGGTTTTCGTTTCAGGAATCTGTGCTGGAGTAAATTATCTTTATAC
CCGTAAGCAAGAAGTCCATAGTGTCCTAGCCAGTAAGAAGTCGGTGAAGCTTTTTTACAGTATGTTACTCTTAATTAATTTGT
TAGGAGCTGTTCTTGTTTTGTCAGATAACTTGTTCATCAAAAATACGCTGCAGCAAGAATTAGTTGACTTTTTATTGCCATCCT
TCTTTTTCCTATTTGGGCTAGATTTGCTGATTTTTTTACCCTTGAAAAAATACGTGCGCGATTTTCTTGCTATGCTGGACAGAA
AAAAGACAGTGTTGGTGACTATTTTAGCAACACTTCTTTTCTTAAGAAATCCAATGACCATTGTCTCACTTCTGATTTATATTG
GACTGGGCTTGTTTTTTGCAGCCTATCTTGTCCCAAATTCGGTTAAGAAGGAAGTTTCCTTTTATGGTCATATTTTCCGAGATC
TTGTATTGGTCATTGTTACGCTCATTTTCTTTTAG

4252.2 (SEQ. ID. NO. 358)
ATGGTTAAAAAAATTATTGGAATGGTGCTAGCTTTACTTTCTGTAACTGTAGTAGGAGTAGGTGTTTTTGCTTATACTATTTAT
CAACAAGGGACAGAAACCTTAGCTAAAACCTATAAAAAAATCGGTGAAGAAACCAAGGTTATTGAAGCGACTGAACCTCTA
ACCATTCTGTTAATGGGAGTGGACACCGGAAATGTTGAACGAACTGAAACTTGGGTCGGTAGAAGTGATAGCATGATCTTGA
TGACAGTGAATCCTAAAACGAAAAAAACAACAATGATGAGTTTAGAGCGGGATATTCTGACGCGCATTGAATCAGGGAATG
GTCAGGCTCATGAAGCGAAACTGAACTCAGCATATGCAGATGGTGGAGCAGAGCTTGCTATAGAAACCATTCAAAAAATGA
TGAATATCCATATTGATCGCTATGTGATGGTCAATATGAGAGGATTGCAAAAACTAGTGGATGCAGTAGGAGGTATTACAGT
CAATAATATCCTAGGTTTCCCAATTTCTATCAGTGACCAAGAAGAATTTAATACTATTTCTATCGGTGTTGGGGAGCAACATA
TTGGGGGAGAAGAAGCCCTAGTCTATGCACGAATGCGTTACCAAGATCCTGAGGGGGATTATGGTCGTCAAAAACGTCAAC
GTGAAGTTATTCAAAAAGTCATGGAAAAAGCTCTCAGTTTAAATAGCATTGGTCATTATCAAGAGATTCTAAAAAGCTTTGAG
TGACAATATGCAGACCAATATTGATTTGTCTGCAAAAAGTATCCCTAACTTGCTAGGCTATAAAGATTCATTTAAAACCATTG
AAACTCAGCAGTTGCAGGGTGAAGGAGAGATACTTCAAGGTGTTTCTTACCAGATTGTTTCGAGAGCACATATGTTGGAAAT
GCAAAATCTACTCCGACGTTCTTTGGGACAAGAAGAAGTTACTCAGCTTGAAACCAATGCGGTTTTATTTGAAGATTTATTTG
GCAGAGCACCTGTTGGTGATGAAGATAATTAA

4256.2 (SEQ. ID. NO. 359)
ATGAAAAAACAAGCCTATGTCATTATTGCTCTCACCTCCTTCCTATTTGTCTTTTTTTTCTCCCACAGCTTGCTGGAAATACTT
GATTTTGACTGGTCTATCTTTTTGCACGATGTCGAAAAAACAGAAAAATTTGTCTTTTTATTGTTGGTTTTCAGCATGTCCATG
ACCTGTCTCTTAGCCCTGTTTTGGCGAGGGATCGAAGAGCTTTCTCTAAGAAAAATGCAGGCTAATCTCAAGCGTTTATTAGC
AGGGCAAGAAGTGGTTCAGGTTGCAGATCCAGATTTGGATGCCAGTTTCAAGTCCTTATCAGGTAAACTTAACCTTTTGACA
GAGGCTCTTCAAAAAGCTGAAAATCAGAGCCTTGCTCAGGAAGAGGAAATCATCGAGAAGGAACGGAAGCGAATTGCTCGG
GATTTGCACGATACAGTCAGTCAGGAGTTGTTTGCGGCCCACATGATTTTATCGGGTATCAGTCAGCAGGCTTTGAAATTGGA
TAGAGAAAAGATGCAGACCCAGTTGCAGAGTGTCACAGCTATTTTAGAAACAGCCCAGAAGGATTTGCGGGTTTTGCTCTTG
CATTTGCGACCAGTTGAACTGGAGCAGAAGAGCTTGATAGAAGGGATTCAAATTCTTTTAAAAGAGCTTGAGGACAAGAGTG
ATCTTAGGGTTAGTCTCAAGCAGAATATGACGAAATTGCCTAAGAAAATCGAGGAGCATATCTTCCGTATCCTGCAAGAGTT
GATTAGCAATACCCTCCGCCATGCCCAGGCATCTTGCCTAGATGTCTACCTCTATCAGACAGATGTTGAATTGCAACTGAAGG
TGGTGGACAATGGGATTGGTTTCCAGTTAGGGAGCTTAGACGACTTGAGTTATGGACTGCGAAATATCAAGGAGCGGGTTGA
AGATATGGCTGGAACAGTTCAACTCTTGACAGCTCCCAAGCAAGGGCTGGCGGTTGATATCCGTATTCCCCTGTTAGATAAG
GAATGA

4263.1 (SEQ. ID. NO. 360)
ATGATTGTTTCCATTATTTCTCAAGGATTTGTCTGGGCTATTCTAGGTCTGGGAATCTTTATGACATTTAGGATTTTAAACTTT
CCAGATATGACGACAGAAGGTTCCTTCCCTCTTGGGGGAGCTGTTGCTGTCACTTTGATAACCAAAGGCGTGAACCCATTTTT
AGCGACACTTGTTGCTGTAGGAGCAGGTTGTTTGGCTGGAATGGCAGCAGGCCTTCTTTATACAAAAGGGAAGATCCCAACC
TTGCTCTCAGGGATTTTGGTGATGACTTCTTGTCACTCAATCATGCTCTTGATTATGGGACGTGCGAATTTAGGCCTGCTTGGA

ACCAAGCAAATTCAGGATGTTTTGCCTTTTGATTCGGATTTGAATCAACTCTTGACAGGTCTCATCTTTGTGAGTATTGTTATT
GCTCTCATGCTCTTTTTCTTGGACACTAAACTCGGACAAGCCTATATTGCTACAGGGGATAATCCTGATATGGCTAGAAGTTT
CGGGATTCATACTGGACGCATGGAGCTCATGGGCTTGGTCTTATCAAATGGTGTGATTGCCCTTGCAGGTGCCCTCATTGCTC
AGCAAGAAGGTTATGCCGATGTGTCTCGAGGGATCGGGGTTATCGTTGTGGGGCTTGCAAGTTTGATTATTGGAGAAGTTAT
TTTCAAGAGTTTGAGCTTGGCAGAGCGTTTGGTTACTATCGTTGTAGGTTCTATCGCTTATCAATTTTTAGTGTGGGCAGTTAT
CGCACTTGGCTTTAATACAAGTTACCTTCGTTTATACAGTGCCTTGATTTTAGCAGTCTGCCTCATGATTCCAACATTTAAGCA
AACAATCTTGAAAGGAGCCAAGTTAAGCAAATGA

4346.1 (SEQ. ID. NO. 361)
ATGAAAAAAATGAAAGTTTGGTCTACTGTACTTGCAACGGGAGTTGCTCTTACTACACTTGCTGCTTGCTCTGGAGGTTCAAA
TTCTACGACTGCTTCTTCATCTGAAGAAAAAGCTGATAAAAGTCAAGAATTAGTTATCTATTCGAACTCAGTCTCAAATGGTC
GTGGTGATTGGTTAACTGCTAAAGCAAAAGAAGCTGGTTTTAATATAAAAATGGTTGATATCGCTGGCGCTCAATTAGCAGA
CCGTGTTATTGCTGAGAAGAATAATGCAGTTGCAGATATGGTATTTGGAATTGGTGCTGTTGATTCAAATAAAATTAGAGATC
AAAAATTACTAGTACAGTACAAGCCTAAATGGTTAGATAAAATTGATCAATCTTTATCAGATAAAGATAATTATTATAATCCT
GTGATTGTTCAACCATTAGTTTTAATTGGGGCGCCTGATGTAAAAGAAATGCCTAAAGATTGGACTGAATTAGGTAGTAAGT
ATAAAGGTAAATATTCAATTTCTGGTCTTCAAGGAGGTACAGGACGGGCAATTCTAGCAAGTATCTTAGTTCGATACCTTGAT
GATAAAGGTGAATTAGGTGTTTCCGAAAAAGGTTGGGAAGTAGCAAAAGAATATTTGAAAAATGCATACACTCTTCAAAAG
GGAGAAAGTTCAATTGTTAAGATGTTAGACAAAGAAGATCCAATACAATATGGAATGATGTGGGGTTCTGGTGCATTAGTTG
GACAAAAAGAACAAAATGTTGTTTTCAAAGTTATGACTCCTGAGATTGGTGTACCATTTGTAACTGAACAAACTATGGTTTTA
AGCACTAGTAAAAAACAAGCGTTAGCTAAAGAATTTATTGATTGGTTTGGTCAATCAGAAATTCAAGTAGAATATAGTAAGA
ACTTTGGATCTATTCCTGCAAATAAAGATGCCCTCAAAGATCTACCTGAAGATACGAAGAAATTTGTTGATCAAGTGAAACC
ACAAAATATTGACTGGGAAGCTGTTGGAAAGCATTTGGATGAATGGGTAGAAAAAGCTGAATTAGAATACGTACAATAA

4346.2 (SEQ. ID. NO. 362)
ATGATTAAATTTGATAATATTCAAATTAAATATGGTGATTTTGTTGCAATTGATAATCTGAATTTAGATATACATGAAGGGGA
ATTTTTTACATTTCTTGGGCCTTCAGGATGTGGTAAATCAACTACTTTGAGAGCATTGGTAGGTTTTCTAGATCCATCATCAGG
AAGTATTGAAGTTAATGGAACAGATGTCACTCATTTGGAACCTGAAAAGCGTGGAATTGGTATTGTATTTCAATCTTATGCGC
TATTTCCAACTATGACTGTTTTTGATAATATTGCATTTGGTTTAAAAGTTAAGAAGGTAGCTCCAGATGTTATTAAAGCTAAA
GTATCAGCAGTGGCAGCAAAAATTAAGATCTCTGATCAACAGTTACAGCGTAATGTATCAGAATTATCTGGGGGTCAACAAC
AAAGGGTAGCATTGGCTCGTGCTCTGGTTCTTGAACCTAAAATTCTTTGTCTAGATGAACCATTGTCAAACCTTGACGCAAAA
TTACGTGTAGATTTGAGAAAAGAGTTGAAAAGACTTCAAAAAGAGTTAGGTATTACTACTTTATATGTTACTCATGATCAAG
AGGAAGCCTTGACTTTATCTGATAGAATTGCAGTCTTTAACAATGGATACATCGAACAGGTCGGTACACCAGTAGAGATTTA
TCATAATTCTCAAACTGAATTTGTATGTGATTTTATTGGAGATATTAATGTTTTGACCGATGAAACAGTCCACGAAGTATTAT
TGAAAAATACAAGCGTTTTCTTAGAGGATAAAAAAGGATACATTCGATTAGAGAAAGTTCGATTCAATCGTGAAACTGAACA
AGATTTTATTCTAAAAGGGACAATTATTGATGTTGAGTTTTCTGGAGTTACAATTCACTATACAATAAAAGTTTCTGAAAGTC
AGATTCTTAATGTAACAAGTATTGATAGTCAGGCTGCTATTAGATCTGTCGGAGAAAGTGTGGAATTATTTATCACACCATCA
GACGTTCTGCAATTTTAA

4346.3 (SEQ. ID. NO. 363)
ATGCGTCATAAATTAAATTTAAAAGATTGGCTTATTCGTTTAGGGTTAATCTGGTTCTTAGTAACATTTATTATTTATCCAAAC
TTTGATCTAGTAGTGAATGTATTTGTAAAAGGAGGAGAATTTTCCCTTGATGCTGTACATCGTGTTCTAAAATCTCAGAGGGC
ACTTCAGAGTATTATGAACAGTTTTAAGTTAGCATTTTCACTCATTATTACAGTTAATGTCGTAGGTATTCTTTGTGTTCTATT
TACAGAGTACTTTGATATTAAAGGTGCTAAAATTTTAAAATTAGGTTATATGACCTCTTTAATTTATGGAGGAGTGGTTTTAG
CGACTGGATATAAATTTGTCTATGGTCCTTATGGATTGATTACAAAATTTTTACAAAATGTTATCCCTTCTTTAGACCCTAACT
GGTTTATTGGGTATGGTGCAGTCTTATTCATTATGACATTTTCAGGAACTGCTAATCATACATTGTTTTTAACAAATACAATTC
GAAGCGTTGACTATCACACTATTGAGGCTGCTCGAAATATGGGAGCAAAACCATTTACTGTTTTCCGAAAAGTAGTGTTACC
AACCTTAATTCCAACTCTATTTGCACTTACTATTATGGTTTTTCTTAGTGGTTTATCTGCAGTAGCAGCACCCATGATTGTTGG
TGGTAAAGAATTTCAAACTATAAATCCAATGATTATTACATTTGCAGGGATGGGGAATTCTCGTGATTTAGCTGCCCTACTTG
CAATTATTTTAGGTATTGCAACTACAATTTTGCTTACTATCATGAATAAGATAGAAAAAGGTGGAAATTATATTTCTATCTCT
AAGACTAAAGCGCCTCTTAAAAAACAAAAAATTGCGTCTAAGCCTTGGAATATCATTGCTCACATTGTAGCATATGGATTGT
TCACAGTTTTCATGCTTCCACTAATTTTTATAGTATTATACTCATTTACAGATCCAGTTGCAATTCAAACAGGTAACTTAACAT
TATCAAACTTTACTTTAGAAAATTATCGCTTATTCTTTAGTAATAGTGCGGCATTCTCTCCATTCTTGGTCAGCTTTATTTATTC
TATTATTGCTGCGACAACAGCAACAATTCTCGCAGTTGTATTTGCTCGTGTTGTCAGAAAACATAAATCTCGTTTTGATTTCTT
ATTTGAATATGGTGCTCTACTTCCTTGGTTACTACCAAGTACACTTTTAGCAGTAAGTTTATTATTTACTTTTAATCAGCCACA
ATTTCTTGTCTTGAATCAGATTTTGGTAGGTAGTTTGGTAATTCTACTTATTGCATATATAGTTGTAAAAATCCCATTTTCTTAT
AGAATGGTACGTGCTATTTTATTTAGTGTTGATGATGAGATGGAAGATGCAGCAAGAAGTATGGGTGCTTCACCTTTTTATAC
TATGATGAAGGTTATCATTCCATTTATTTTACCGGTTGTTCTCTCTGTTATTGCTTTAAACTTTAACTCTTTATTAACTGACTTC
GACTTATCTGTATTCCTTTACCATCCCCTAGCTCAACCATTAGGTATTACGATTCGATCTGCAGGTGATGAAACAGCAACATC
TAATGCACAAGCTCTGGTATTTGTTTATACAATTGTTCTGATGATTATTTCTGGAACGGTATTATACTTCACACAAAGACCGG
GGCGTAAAGTAAGGAAATAA

Table 2

(SEQ. ID. NO. 1)
MEELVTLDCLFIDRTKIEANANKYSFVWKKTTEKFSAKLQEQIQVYFQEEITPLLIKYAMFDKKQKRGYKESAKNLANWHYNDKE
DSYTHPDGWYYRFHHTKYQKTQTDFQQEIKVYYADEPESAPQKGLYMNERYQNLKAKECQALLSPQGRQIFAQRKIDVEPVFGQI
KASLGYKRCNLRGKRQVRIDMGLVLMANNLLKYSKMKZ

(SEQ. ID. NO. 2)
MGKGHWNRKRVYSIRKFAVGACSVMIGTCAVLLGGNIAGESVVYADETLITHTAEKPKEEKMIVEEKADKALETKNIVERTEQSE
PSSTEAIASEKKEDEAVTPKEEKVSAKPEEKAPRIESQASNQEKPLKEDAKAVTNEEVNQMIEDRKVDFNQNWYFKLNANSKEAIK
PDADVSTWKKLDLPYDWSIFNDFDHESPAQNEGGQLNGGEAWYRKTFKLDEKDLKKNVRLTFDGVYMDSQVYVNGQLVGHYP
NGYNQFSYDITKYLQKDGRENVIAVHAVNKQPSSRWYSGSGIYRDVTLQVTDKVHVEKNGTTILTPKLEEQQHGKVETHVTSKIV
NTDDKDHELVAEYQIVERGGHAVTGLVRTASRTLKAHESTSLDAILEVERPKLWTVLNDKPALYELITRVYRDGQLVDAKKDLFG
YRYYHWTPNEGFSLNGERIKFHGVSLHHDHGALGAEENYKAEYRRLLKQMKEMGVNSIRTTHNPASEQTLQIAAELGLLVQEEAF
DTWYGGKKPYDYGRFFEKDATHPEARKGEKWSDFDLRTMVERGKNNPAIFMWSIGNEIGEANGDAHSLATVKRLVKVIKDVDK
TRYVTMGADKFRFGNGSGGHEKIADELDAVGFNYSEDNYKALRAKHPKWLIYGSETSSATRTRGSYYRPERELKHSNGPERNYE
QSDYGNDRVGWGKTATASWTFDRDNAGYAGQFIWTGTDYIGEPTPWHNQNQTPVKSSYFGIVDTAGIPKHDFYLYQSQWVSVK
KKPMVHLLPHWNWENKELASKVADSEGKIPVRAYSNASSVELFLNGKSLGLKTFNKKQTSDGRTYQEGANANELYLEWKVAYQ
PGTLEAIARDESGKEIARDKITTAGKPAAVRLIKEDHAIAADGKDLTYIYYEIVDSQGNVVPTANNLVRFQLHGQGQLVGVDNGEQ
ASRERYKAQADGSWIRKAFNGKGVAIVKSTEQAGKFTLTAHSDLLKSNQVTVFTGKKEGQEKTVLGTEVPKVQTIIGEAPEMPTT
VPFVYSDGSRAERPVTWSSVDVSKPGIVTVKGMADGREVEARVEVIALKSELPVVKRIAPNTDLNSVDKSVSYVLIDGSVEEYEVD
KWEIAEEDKAKLAIPGSRIQATGYLEGQPIHATLVVEEGNPAAPAVPTVTVGGEAVTGLTSQKPMQYRTLAYGAKLPEVTASAKN
AAVTVLQASAANGMRASIFIQPKDGGPLQTYAIQFLEEAPKIAHLSLQVEKADSLKEDQTVKLSVRAHYQDGTQAVLPADKVTFS
TSGEGEVAIRKGMLELHKPGAVTLNAEYEGAKDQVELTIQANTEKKIAQSIRPVNVVTDLHQEPSLPATVTVEYDKGFPKTHKVT
WQAIPKEKLDSYQTFEVLGKVEGIDLEARAKVSVEGIVSVEEVSVTTPIAEAPQLPESVRTYDSNGHVSSAKVAWDAIRPEQYAKE
GVFTVNGRLEGTQLTTKLHVRVSAQTEQGANISDQWTGSELPLAFASDSNPSDPVSNVNDKLISYNNQPANRWTNWNRTNPEASV
GVLFGDSGILSKRSVDNLSVGFHEDHGVGVPKSYVIEYYVGKTVPTAPKNPSFVGNEDHVFNDSANWKPVTNLKAPAQLKAGEM
NHFSFDKVETYAVRIRMVKADNKRGTSITEVQIFAKQVAAAKQGQTRIQVDGKDLANFNPDLTDYYLESVDGKVPAVTASVSNN
GLATVVPSVREGEPVRVIAKAENGDILGEYRLHFTKDKSLLSHKPVAAVKQARLLQVGQALELPTKVPVYFTGKDGYETKDLTVE
WEEVPAENLTKAGQFTVRGRVLGSNLVAEITVRVTDKLGETLSDNPNYDENSNQAFASATNDIDKNSHDRVDYLNDGDHSENRR
WTNWSPTPSSNPEVSAGVIFRENGKIVERTVTQGKVQFFADSGTDAPSKLVLERYVGPEFEVPTYYSNYQAYDADHPFNNPENWE
AVPYRADKDIAAGDEINVTFKAIKAKAMRWRMERKADKSGVAMIEMTFLAPSELPQESTQSKILVDGKELADFAENRQDYQITYK
GQRPKVSVEENNQVASTVVDSGEDSFPVLVRLVSESGKQVKEYRIHLTKEKPVSEKTVAAVQEDLPKIEFVEKDLAYKTVEKKDS
TLYLGETRVEQEGKVGKERIFTAINPDGSKEEKLREVVEVPTDRIVLVGTKPVAQEAKKPQVSEKADTKPIDSSEASQTNKAQLPST
GSAASQAAVAAGLTLLGLSAGLVVTKGKKEDZ

(SEQ. ID. NO. 3)
MKIMKKKYWTLAILFFCLFNNSVTAQEIPKNLDGNITHTQTSESFSESDEKQVDYSNKNQEEVDQNKFRIQIDKTELFVTTDKHLEK
NCCKLELEPQINNDIVNSESNNLLGEDNLDNKIKENVSHLDNRGGNIEHDKDNLESSIVRKYEWDIDKVTGGGESYKLYSKSNSKV
SIAILDSGVDLQNTGLLKNLSNHSKNYVPNKGYLGKEEGEEGIISDIQDRLGHGTAVVAQIVGDDNINGVNPHVNINVYRIFGKSSA
SPDWIVKAIFDAVDDGNDIINLSTGQYLMIDGEYEDGTNDFETFLKYKKAIDYANQKGVIIVAALGNDSLNVSNQSDLLKLISSRKK
VRKPGLVVDVPSYFSSTISVGGIDRLGNLSDFSNKGDSDAIYAPAGSTLSLSELGLNNFINAEKYKEDWIFSATLGGYTYLYGNSFA
APKVSGAIAMIIDKYKLKDQPYNYMFVKKFWKKHYQZ

(SEQ. ID. NO. 4)
MKKTWKVFLTLVTALVAVVLVACGQGTASKDNKEAELKKVDFILDWTPNTNHTGLYVAKEKGYFKEAGVDVDLKLPPEESSSD
LVINGKAPFAVYFQDYMAKKLEKGAGITAVAAIVEHNTSGIISRKSDNVSSPKDLVGKKYGTWNDPTELAMLKTLVESQGGDFEK
VEKVPNNDSNSITPIANGVFDTAWIYYGWDGILAKSQGVDANFMYLKDYVKEFDYYSPVIIANNDYLKDNKEEARKVIQAIKKGY
QYAMEHPEEAADILIKNAPELKEKRDFVIESQKYLSKEYASDKEKWGQFDAARWNAFYKWDKENGILKEDLTDKGFTNEFVKZ

(SEQ. ID. NO. 5)
MKRTWRNSFVTNLNTPFMIGNIEIPNRTVLAPMAGVTNSAFRTIAKELGAGLVVMEMVSDKGIQYNNEKTLHMLHIDEGENPVSI
QLFGSDEDSLARAAEFIQENTKTDIVDINMGCPVNKIVKNEAGAMWLKDPDKIYSIINKVQSVLDIPLTVKMRTGWADPSLAVENA
LAAEAAGVSALAMHGRTREQMYTGHADLETLYKVAQALTKIPFIANGDIRTVQEAKQRIEEVGADAVMIGRAAMGNPYLFNQIN
HYFETGEILPDLTFEDKMKIAYEHLKRLINLKGENVAVREFRGLAPHYLRGTSGAAKLRGAISQASTLAEIETLLQLEKAZ

(SEQ. ID. NO. 6)
MIKNPKLLTKSFLRSFAILGGVGLVIHIAIYLTFPFYYIQLEGEKFNESARVFTEYLKTKTSDEIPSLLQSYSKSLTISAHLKRDIVDKR
LPLVHDLDIKDGKLSNYIVMLDMSVSTADGKQVTVQFVHGVDVYKEAKNILLLYLPYTFLVTIAFSFVFSYFYTKRLLNPLFYISEV
TSKMQDLDDNIRFDESRKDEVGEVGKQINGMYEHLLKVIYELESRNEQIVKLQNQKVSFVRGASHELKTPLASLRIILENMQHNIG
DYKDHPKYIAKSINKIDQMSHLLEEVLESSKFQEWTECRETTVKPVLVDILSRYQELAHSIGVTIENQLTDATRVVMSLRALDKVLT
NLISNAIKYSDKNGRVIISEQDGYLSIKNTCAPLSDQELEHLFDIFYHSQIVTDKDESSGLGLYIVNNILESYQMDYSFLPYEHGMEFK
ISLZ

(SEQ. ID. NO. 7)
MYLGDLMEKAECGQFSILSFLLQESQTTVKAVMEETGFSKATLTKYVTLLNDKALDSGLELAIHSEDENLRLSIGAATKGRDIRSLF
LESAVKYQILVYLLYHQQFLAHQLAQELVISEATLGRHLAGLNQILSEFDLSIQNGRWRGPEHQIHYFYFCLFRKVWSSQEWEGHM
QKPERKQEIANLEEICGASLSAGQKLDLVLWAHISQQRLRVNACQFQVIEEKMRGYFDNIFYLRLLRKVPSFFAGQHIPLGVEDGE
MMIFFSFLLSHRILPLHTMEYILGFGGQLADLLTQLIQEMKKEELLGDYTEDHVTYELSQLCAQVYLYKGYILQDRYKYQLENRHP
YLLMEHDFKETAEEIFHALPAFQQGTDLDKKILWEWLQLIEYMAENGGQHMRIGLDLTSGFLVFSRMAAILKRYLEYNRFITIEAY
DPSRHYDLLVTNNPIHKKEQTPVYYLKNDLDMEDLVAIRQLLFTZ

(SEQ. ID. NO. 8)
MEFSKKTRELSIKKMQERTLDLLIIGGGITGAGVALQAAASGLETGLIEMQDFAEGTSSRSTKLVHGGLRYLKQFDVEVVSDTVSE
RAVVQQIAPHIPKSDPMLLPVYDEDGATFSLFRLKVAMDLYDLLAGVSNTPAANKVLSKDQVLERQPNLKKEGLVGGGVYLDFR

NNDARLVIENIKRANQDGALIANHVKAEGFLFDESGKITGVVARDLLTDQVFEIKARLVINTTGPWSDKVRNLSNKGTQFSQMRPT
KGVHLVVDSSKIKVSQPVYFDTGLGDGRMVFVLPRENKTYFGTTDTDYTGDLEHPKVTQEDVDYLLGIVNNRFPESNITIDDIESS
WAGLRPLIAGNSASDYNGGNNGTISDESFDNLIATVESYLSKEKTREDVESAVSKLESSTSEKHLDPSAVSRGSSLDRDDNGLLTLA
GGKITDYRKMAEGAMERVVDILKAEFDRSFKLINSKTYPVSGGELNPANVDSEIEAFAQLGVSRGLDSKEAHYLANLYGSNAPKV
FALAHSLEQAPGLSLADTLSLHYAMRNELTLSPVDFLLRRTNHMLFMRDSLDSIVEPILDEMGRFYDWTEEEKATYRADVEAALA
NNDLAELKNZ

(SEQ. ID. NO. 9)
MMNELFGEFLGTLILILLGNGVVAGVVLPKTKSNSSGWIVITMGWGIAVAVAVFVSGKLSPAYLNPAVTIGVALKGGLPWASVLP
YILAQFAGAMLGQILVWLQFKPHYEAEENAGNILATFSTGPAIKDTVSNLISEILGTFVLVLTIFALGLYDFQAGIGTFAVGTLIVGIG
LSLGGTTGYALNPARDLGPRIMHSILPIPNKGDGDWSYAWIPVVGPVIGAALAVLVFSLFZ

(SEQ. ID. NO. 10)
MTKKKIERISVIHREKILWLKWYFMRDKEQPKYSVLERKMFDAAKNQDMLAYQKYATIKQITDIRVQTSEADILEAVKEVYVYNH
MNVIGACQRILFISQSPAYDKLNKWFNIYSDLYFSVVPLPKMGVYHEMVGIZ

(SEQ. ID. NO. 11)
MKNSNEAEMKLLYTDIRTSLTEILTREAEELVAAGKRVFYIAPNSLSFEKERAVLEYLSQQASFSITVTRFAQMARYLVLNDLPAKT
TLDDIGLGLAFYKCLAELDPKDLRVYGAIKQDPQLIQQLIELYHEMTKSQMSFLDLENLTDEDKRADLLLIFEKVTAYLNQGQLAQ
ESQLSHLIEAIENDKVSSDFNQIALVIDGFTRFSAEEERVVDLLHGKGVEIVIGAYASKKAYTSPFSEGNLYQASVKFLHHLASKYQT
PAQDCSQTHEKMDSFDKASRLLESSYDFSELALDVDEKDRENLQIWSCLTQKEELELVARSIRQKLHENSDLSYKHFRILLGDVAS
YQLSLKTIFDQYQIPFYLGRSEAMAHHPLTQFVESILALKRYRFRQEDLINLLRTDLYTDLSQSDIDAFEQYIRYLGINGLPAFQQTFT
KSHHGKFNLERLNVLRLRILAPLETLFASRKQKAEKLLQKWSVFLKEGAVTKQLQDLTTTLEAVEQERQAEVWKAFCHVLEQFAT
VFAGSQVSLEDFLALLHSGMSLSQYRTIPATVDTVLVQSYDLIAPLTADFVYAIGLTQDNLPKISQNTSLLTDEERQNLNQATEEGV
QLLIASSENLKKNRYTMLSLVNSARKQLFLSAPSLFNESESKESAYLQELIHFGFRRREKRMNHKGLSKEDMGSYHSLLSSLVAYH
QQGEMSDTEQDLTFVKVLSRVIGKKLDQQGLENPAIPTSPSSKTLAKDTLQALYPAKQEFYLSTSGLTEFYRNEYSYFLRYVLGLQ
EELRLHPDARSHGNFLHRIFERALQLPNEDSFDQRLEQAIQETSQEREFEAIYQESLEAQFTKEVLLDVARTTGHILRHNPAIETIKEE
ANFGGKDQAFIQLDNGRSVFVRGKVDRIDRLKANGAIGVVDYKSSLTQFQFPHFFNGLNSQLPTYLAALKREGEQNFFGAMYLEM
AEPVQSLMAVKSLAGAVVEASKSMKYQGLFLEKESSYLGEFYNKNKANQLTDEEFQLLLDYNAYLYKKAAEKILAGRFAINPYT
ENGRSIAPYVQQHQAITGFEANYHLGQARFLEKLDLADGKRLVGEKLKQAWLEKIREELNRZ

(SEQ. ID. NO. 12)
MKLIPFLSEEEIQKLQEAEANSSKEQKKTAEQIEAIYTSAQNILVSASAGSGKTFVMAERILDQLARGVEISQLFISTFTVKAATELKE
RLEKKISKKIQETDDVDLKQHLGRQLADLPNAAIGTMDSFTQKFLGKHGYLLDIAPNFRILQNQSEQLILENEVFHEVFEAHYQGK
QKETFSHLLKNFAGRGKDERGLRQQVYKIYDFLQSTSNPQKWLSESFLKGFEKADFTSEKEKLTEQIKQALWDLESFFRYHLDND
AKEFAKAAYLENVQLILDEIGSLNQESDSQAYQAVLARVVAISKEKNGRALTNASRKADLKPLADAYNEERKTQFAKLGQLSDQI
AILDYQERYHGDTWKLAKTFQSFMSDFVEAYRQRKRQENAFEFADISHYTIEILENFPQVRESYQERFHEVMVDEYQDTNHIQER
MLELLSNGHNRFMVGDIKQSIYRFRQADPQIFNEKFQRYAQNPQEGRLIILKENFRSSSEVLSATNDVFERLMDQEVGEINYDNKH
QLVFANTKLTPNPDNKAAFLLYDKDDTGEEEESQTETKLTGEMRLVIKEILKLHQEKGVAFKEIALLTSSRSRNDQILLALSEYGIP
VKTDGEQNNYLQSLEVQVMLDTLRVIHNPLQDYALVALMKSPMFGFDEDELARLSLQKAEDKVHENLYEKLVNAQKMASSQKG
LIHTALAEKLKQFMDILASWRLYAKTHSLYDLIWKIYNDRFYYDYVGALPNGPARQANLYALALRADQFEKSNFKGLSRFIRMID
QVLEAQHDLASVAVAPPKDAVELMTIHKSKGLEFPYVFILNMDQDFNKQDSMSEVILSRQNGLGVKYIAKMETGAVEDHYPKTIK
LSIPSLTYRQNEEELQLASYSEQMRLLYVAMTRAEKKLYLVGKGSREKLESKEYPAAKNGKLNSNTRLQARNFQDWLWAISKVFT
KDKLNFSYRFIGEDQLTREAIGELETKSPLQDSSQADNRQSDTIKEALEMLKEVEVYNTLHRAAIELPSVQTPSQIKKFYEPVMDME
GVEIAGQGQSVGKKISFDLPDFSTKEKVTGAEIGSATHELMQRIDLSQQLTLASLTETLKQVQTSQAVRDKINLDKILAFFDTVLGQ
EILANTDHLYREQPFSMLKRDQKSQEDFVVRGILDGYLLYENKIVLFDYKTDRYDEPSQLVDRYRGQLALYEEALSRAYSIENIEK
YLILLGKDEVQVVKVZ

(SEQ. ID. NO. 13)
MELARHAESLGVDAIATIPPIYFRLPEYSVAKYWNDISSAAPNTDYVIYNIPQLAGVALTPSLYTEMLKNPRVIGVKNSSMPVQDIQ
TFVSLGGEDHIVFNGPDEQFLGGRLMGARAGIGGTYGAMPELFLKLNQLIADKDLETARELQYAINAIIGKLTSAHGNMYGVIKEV
LKINEGLNIGSVRSPLTPVTEEDRPVVEAAAALIRETKERFLZ

(SEQ. ID. NO. 14)
MYKTKCLREKLVLFLKIFFPILIYQFANYSASFVDTAMTGQYNTMDLAGVSMATSIWNPFFTFLTGIVSALVPIIGHHLGRGKKEEV
ASDFYQFIYLALGLSVVLLGMVLFLAPIILNHIGLEAAVAAVAVRYLWFLSIGIIPLLLFSVIRSLLDSLGLTKLSMYLMLLLLPLNSG
FNYLLIYGAFGVPELGGAGAGLGTSLAYWVLLGISVLVLFKQEKLKALHLEKRIPLNMDKIKEGVRLGLPIGGTVFAEVAIFSVVGL
IMAKFSPLIIASHQSAMNFSSLMYAFPMSISSAMAIVVSYEVGAKRFDDAKTYIGLGRWTALIFAAFTLTFLYIFRGNVASLYGNDP
KFIDLTVRFLTYSLFFQLADTFAAPLQGILRGYKDTVIPFYLGLLGYWGVAIPVYAIZ

(SEQ. ID. NO. 15)
MSTLAKIEALLFVAGEDGIRVRQLAELLSLPPTGIQQSLGKLAQKYEKDPDSSLALIETSGAYRLVTKPQFAEILKEYSKAPINQSLS
RAALETLSIIAYKQPITRIEIDAIRGVNSSGALAKLQAFDLIKEDGKKEVLGRPNLYVTTDYFLDYMGINHLEELPVIDELEIQAQESQ
LFGERIEEDENQZ

(SEQ. ID. NO. 16)
MDTMISRFFRHLFEALKSLKRNGWMTVAAVSSVMITLTLVAIFASVIFNTAKLATDIENNVRVVVYIRKDVEDNSQTIEKEGQTVT
NNDYHKVYDSLKNMSTVKSVTFSSKEEQYEKLTEIMGDNWKIFEGDANPLYDAYIVEANTPNDVKTIAEDAKKIEGVSEVQDGG
ANTERLFKLASFIRVWGLGIAALLIFIAVFLISNTIRITIISRSREIQIMRLVGAKNSYIRGPFLLEGAFIGLLGAIAPSVLVFIVYQIVYQS
VNKSLVGQNLSMISPDLFSPLMIALLFVIGVFIGSLGSGISMRRFLKIZ

(SEQ. ID. NO. 17)

MKKVRFIFLALLFFLASPEGAMASDGTWQGKQYLKEDGSQAANEWVFDTHYQSWFYIKADANYAENEWLKQGDDYFYLKSGG
YMAKSEWVEDKGAFYYLDQDGKMKRNAWVGTSYVGATGAKVIEDWVYDSQYDAWFYIKADGQHAEKEWLQIKGKDYYFKS
GGYLLTSQWINQAYVNASGAKVQQGWLFDKQYQSWFYIKENGNYADKEWIFENGHYYYLKSGGYMAANEWIWDKESWFYLK
FDGKMAEKEWVYDSHSQAWYYFKSGGYMTANEWIWDKESWFYLKSDGKIAEKEWVYDSHSQAWYYFKSGGYMTANEWIWD
KESWFYLKSDGKIAEKEWVYDSHSQAWYYFKSGGYMAKNETVDGYQLGSDGKWLGGKTTNENAAYYQVVPVTANVYDSDGE
KLSYISQGSVVWLDKDRKSDDKRLAITISGLSGYMKTEDLQALDASKDFIPYYESDGHRFYHYVAQNASIPVASHLSDMEVGKKY
YSADGLHFDGFKLENPFLFKDLTEATNYSAEELDKVFSLLNINNSLLENKGATFKEAEEHYHINALYLLAHSALESNWGRSKIAKD
KNNFFGITAYDTTPYLSAKTFDDVDKGILGATKWIKENYIDRGRTFLGNKASGMNVEYASDPYWGEKIASVMMKINEKLGGKDZ

(SEQ. ID. NO. 18)
MKKVLQKYWAWAFVVIPLLLQAIFFYVPMFQGAFYSFTNWTGLTYNYKFVGLNNFKLLFMDPKFMNAIGFTAIIAIAMVVGEIAL
GIFIARVLNSKIKGQTFFRAWFFFPAVLSGLTVALIFKQVFNYGLPAIGNALHIEFFQTSLLGTKWGAIFAAVFVLLWQGVAMPIIIFL
AGLQSIPTEITEAARIDGATSKQVFWNIELPYLLPSVSMVFILALKGGLTAFDQVFAMTGGGPNNATTSLGLLVYNYAFKNNQFGY
ANAIAVILFFLIVVISIIQLRVSKKFEIZ

(SEQ. ID. NO. 19)
MMKQDERKALIGKYILLILGSVLILVPLLATLFSSFKPTKDIVDNFFGFPTNFTWDNFSRLLADGIGGYYWNSVVITVLSLLAVMIFIP
MAAYSIARNMSKRKAFTIMYTLLILGIFVPFQVIMIPITVMMSKLGLANTFGLILLYLTYAIPQTLFLYVGYIKISIPESLDEAAEIDGA
NQFTTYFRIIFPMMKPMHATTMIINALWFWNDFMLPLLVLNRDSKMWTLPLFQYNYAGQYFNDYGPSFASYVVGIISITIVYLFFQ
RHIISGMSNGAVKZ

(SEQ. ID. NO. 20)
MKSILQKMGEHPMLLLFLSYSTVISILAQNWMGLVASVGMFLFTIFFLHYQSILSHKFFRLILQFVLFGSVLSAAFASLEHFQIVKKF
NYAFLSPNMQVWHQNRAEVTFFNPNYYGIICCFCIMIAFYLFTTTKLNWLKVFCVIAGFVNLFGLNFTQNRTAFPAIIAGAIIYLFTTI
KNWKAFWLSIGVFAIGLSFLFSSDLGVRMGTLDSSMEERISIWDAGMALFKQNPFWGEGPLTYMNSYPRIHAPYHEHAHSLYIDTI
LSYGIVGTILLVLSSVAPVRLMMDMSQESGKRPIIGLYLSFLTVVAVHGIFDLALFWIQSGFIFLLVMCSIPLEHRMLVSDMTDZ

(SEQ. ID. NO. 21)
MSKMDVQKIIAPMMKFVNMRGIIALKDGMLAILPLTVVGSLFLIMGQLPFEGLNKSIASVFGANWTEPFMQVVYSGTFAIMGLISCFS
IAYSYAKNSGVEALPAGVLSVSAFFILLRSSYIPKQGEAIGDAISKVWFGGQGIIGAIIIGLVVGSIYTFFIKRKIVIKMPEQVPQAIAKQ
FEAMIPAFVIFLSSMIVYILAKSLTNGGTFIEMIYSAIQVPLQGLTGSLYGAIGIAFFISFLWWFGVHGQSVVNGVVTALLLSNLDAN
KAMLASANLSLENGAHIVTQQFLDSFLILSGSGITFGLVVAMLFAAKSKQYQALGKVAAFPAIFNVNEPVVFGFPIVMNPVMFVPFI
LVPVLAAVIVYGAIATGFMQPFSGVTLPWSTPAILSGFLVGGWQGVITQLVILAMSTLVYFPFFKVQDRLAYQNEIKQSZ

(SEQ. ID. NO. 22)
MKKKDLVDQLVSEIETGKVRTLGIYGHGASGKSTFAQELYQALDSTTVNLLETDPYITSGRHLVVPKDAPNQKVTASLPVAHELES
LQRDILACRRVWMSZ

(SEQ. ID. NO. 23)
MKKRYLVLTALLALSLAACSQEKTKNEDGETKTEQTAKADGTVGSKSQGAAQKKAEVVNKGDYYSIQGKYDEIIVANKHYPLSK
DYNPGENPTAKAELVKLIKAMQEAGFPISDHYSGFRSYETQTKLYQDYVNQDGKAAADRYSARPGYSEHQTGLAFDVIGTDGDL
VTEEKAAQWLLDHAADYGFVVRYLKGKEKETGYMAEEWHLRYVGKEAKEIAASGLSLEEYYGFEGGDYVDZ

(SEQ. ID. NO. 24)
MREPDFLNHFLKKGYFKKHAKAVLALSGGLDSMFLFKVLSTYQKELEIELILAHVNHKQRIESDWEEKELRKLAAEAELPIYISNFS
GEFSEARARNFRYDFFQEVMKKTGATALVTAHHADDQVETIFMRLIRGTRLRYLSGIKEKQVVGEIEIIRPFLHFQKKDFPSIFHFED
TSNQENHYFRNRIRNSYLPELEKENPRFRDAILGIGNEILDYDLAIAELSNNINVEDLQQLFSYSESTQRVLLQTYLNRFPDLNLTKA
QFAEVQQILKSKSQYRHPIKNGYELIKEYQQFQICKISPQADEKEDELVLHYQNQVAYQGYLFSFGLPLEGELIQQIPVSRETSIHIRH
RKTGDVLIKNGHRKKLRRLFIDLKIPMEKRNSALIIEQFGEIVSILGIATNNLSKKTKNDIMNTVLYIEKIDRZ

(SEQ. ID. NO. 25)
MRKFLIILLLPSFLTISKVVSTEKEVVYTSKEIYYLSQSDFGIYFREKLSSPMVYGEVPVYANEDLVVESGKLTPKTSFQITEWRLNK
QGIPVFKLSNHQFIAADKRFLYDQSEVTPTIKKVWLESDFKLYNSPYDLKEVKSSLSAYSQVSIDKTMFVEGREFLHIDQAGWVAK
ESTSEEDNRMSKVQEMLSEKYQKDSFSIYVKQLTTGKEAGINQDEKMYAASVLKLSYLYYTQEKINEGLYQLDTTVKYVSAVNDF
PGSYKPEGSGSLPKKEDNKEYSLKDLITKVSKESDNVAHNLLGYYISNQSDATFKSKMSAIMGDDWDPKEKLISSKMAGKFMEAI
YNQNGFVLESLTKTDFDSQRIAKGVSVKVAHKIGDADEFKHDTGVVYADSPFILSIFTKNSDYDTISKIAKDVYEVLKZ

(SEQ. ID. NO. 26)
MKKQNNGLIKNPFLWLLFIFFLVTGFQYFYSGNNSGGSQQINYTELVQEITDGNVKELTYQPNGSVIEVSGVYKNPKTSKEETGIQF
FTPSVTKVEKFTSTILPADTTVSELQKLATDHKAEVTVKHESSSGIWINLLVSIVPFGILFFFLFSMMGNMGGGNGRNPMSFGRSKA
KAANKEDIKVRFSDVAGAEEEKQELVEVVEFLKDPKRFTKLGARIPAGVLLEGPPGTGKTLLAKAVAGEAGVPFFSISGSDFVEMF
VGVGASRVRSLFEDAKKAAPAIIFIDEIDAVGRQRGVGLGGGNDEREQTLNQLLIEMDGFEGNEGIIVIAATNRSDVLDPALLRPGR
FDRKVLVGRPDVKGREAILKVHAKNKPLAEDVDLKLVAQQTPGFVGADLENVLNEAALVAARRNKSIIDASDIDEAEDRVIAGPS
KKDKTVSQKERELVAYHEAGHTIVGLVLSNARVVHKVTIVPRGRAGGYMIALPKEDQMLLSKEDMKEQLAGLMGGRVAEEIIFN
VQTTGASNDFEQATQMARAMVTEYGMSEKLGPVQYEGNHAMLGAQSPQKSISEQTAYEIDEEVRSLLNEARNKAAEIIQSNRETH
KLIAEALLKYETLDSTQIKALYETGKMPEAVEEESHALSYDEVKSKMNDEKZ

(SEQ. ID. NO. 27)
MKRSSLLVRMVISIFLVFLILLALVGTFYYQSSSSAIEATIEGNSQTTISQTSHFIQSYIKKLETTSTGLTQQTDVLAYAENPSQDKVEG
IRDLFLTILKSDKDLKTVVLVTKSGQVISTDDSVQMKTSSDMMAEDWYQKAIHQGAMPVLTPARKSDSQWVISVTQELVDAKGA
NLGVLRLDISYETLEAYLNQLQLGQQGFAFIINENHEFVYHPQHTVYSSSSKMEAMKPYIDTGQGYTPGHKSYVSQEKIAGTDWTV
LGVSSLEKLDQVRSQLLWTLLGASVTSLLVCLCLVWFSLKRWIAPLKDLRETMLEIASGAQNLRAKEVGAYELREVTRQFNAMLD
QIDQLMVAIRSQEETTRQYQLQALSSQINPHFLYNTLDTIIWMAEFHDSQRVVQVTKSLATYFRLALNQGKDLICLSDEINHVRQYL

FIQKQRYGDKLEYEINENVAFDNLVLPKLVLQPLVENALYHGIKEKEGQGHIKLSVQKQDSGLVIRIEDDGVGFQDAGDSSQSQLK
RGGVGLQNVDQRLKLHFGANYHMKIDSRPQKGTKVEIYINRIETSZ

(SEQ. ID. NO. 28)
MKRSSLLVRMVISIFLVFLILLALVGTFYYQSSSSAIEATIEGNSQTTISQTSHFIQSYIKKLETTSTGLTQQTDVLAYAENPSQDKVEG
IRDLFLTILKSDKDLKTVVLVTKSGQVISTDDSVQMKTSSDMMAEDWYQKAIHQGAMPVLTPARKSDSQWVISVTQELVDAKGA
NLGVLRLDISYETLEAYLNQLQLGQQGFAFIINENHEFVYHPQHTVYSSSSKMEAMKPYIDTGQGYTPGHKSYVSQEKIAGTDWTV
LGVSSLEKLDQVRSQLLWTLLGASVTSLLVCLCLVWFSLKRWIAPLKDLRETMLEIASGAQNLRAKEVGAYELREVTRQFNAMLD
QIDQLMVAIRSQEETTRQYQLQALSSQINPHFLYNTLDTIIWMAEFHDSQRVVQVTKSLATYFRLALNQGKDLICLSDEINHVRQYL
FIQKQRYGDKLEYEINENVAFDNLVLPKLVLQPLVENALYHGIKEKEGQGHIKLSVQKQDSGLVIRIEDDGVGFQDAGDSSQSQLK
RGGVGLQNVDQRLKLHFGANYHMKIDSRPQKGTKVEIYINRIETSZ

(SEQ. ID. NO. 29)
MFFKLLREALKVKQVRSKILFTIFIVLVFRIGTSITVPGVNANSLNALSGLSFLNMLSLVSGNALKNFSIFALGVSPYITASIVVQLLQ
MDILPKFVEWGKQGEVGRRKLNQATRYIALVLAFVQSIGITAGFNTLAGAQLIKTALTPQVFLTIGIILTAGSMIVTWLGEQITDKG
YGNGVSMIIFAGIVSSIPEMIQGIYVDYFVNVPSSRITSSIIFVIILIITVLLIYFTTYVQQAEYKIPIQYTKVAQGAPSSSYLPLKVNPAG
VIPVIFASSITAAPAAILQFLSATGHDWAWVRVAQEMLATTSPTGIAMYALLIILFTFFYTFVQINPEKAAETYKRVVPISMEFVLVK
VQKNICLNFFVVLQLLVPSSLVZ

(SEQ. ID. NO. 30)
MDIRQVTETIAMIEEQNFDIRTITMGISLLDCIDPDINRAAEKIYQKITTKAANLVAVGDEIAAELGIPIVNKRVSVTPISLIGAATDAT
DYVVLAKALDKAAKEIGVDFIGGFSALVQKGYQKGDEILINSIPRALAETDKVCSSVNIGSTKSGINMTAVADMGRIIKETANLSD
MGVAKLVVFANAVEDNPFMAGAFHGVGEADVIINVGVSGPGVVKRALEKVRGQSFDVVAETVKKTAFKITRIGQLVGQMASERL
GVEFGIVDLSLAPTPAVGDSVARVLEEMGLETVGTHGTTAALALLNDQVKKGGVMACNQVGGLSGAFIPVSEDEGMIAAVQNGS
LNLEKLEAMTAICSVGLDMIAIPEDTPAETIAAMIADEAAIGVINMKTTAVRIIPKGKEGDMIEFGGLLGTAPVMKVNGASSVDFISR
GGQIPAPIHSFKNZ

(SEQ. ID. NO. 31)
MTQIIDGKALAAKLQGQLAEKTAKLKEETGLVPGLVVILVGDNPASQVYVRNKERSALAAGFRSEVVRVPETITQEELLDLIAKYN
QDPAWHGILVQLPLPKHIDEEAVLLAIDPEKDVDGFHPLNMGRLWSGHPVMIPSTPAGIMEMFHEYGIDLEGKNAVVIGRSNIVGK
PMAQLLLAKNATVTLTHSRTHNLSKVAAKADILVVAIGRAKFVTADFVKPGAVVIDVGMNRDENGKLCGDVDYEAVAPLASHIT
PVPGGVGPMTITMLMEQTYQAALRTLDRKZ

(SEQ. ID. NO. 32)
MSKFNRIHLVVLDSVGIGAAPDANNFVNAGVPDGASDTLGHISKTVGLNVPNMAKIGLGNIPRETPLKTVAAESNPTGYATKLEEV
SLGKDTMTGHWEIMGLNITEPFDTFWNGFPEEILTKIEEFSGRKVIREANKPYSGTAVIYDFGPRQMETGELIIYTSADPVLQIAAHE
DIIPLDELYRICEYARSITLERPALLGRIIARPYVGEPGNFTRTANRRDLAVSPFFPTVLDKLNEAGIDTYAVGKINDIFNGAGINHDM
GHNKSNSHGIDTLLKTMGLAEFEKGFSFTNLVDFDALYGHRRNAHGYRDCLHEFDERLPEIIAAMRENDLLLITADHGNDPTYAG
TDHTREYIPLLAYSPAFKGNGLIPVGHFADISATVADNFGVETAMIGESFLDKLVZ

(SEQ. ID. NO. 33)
MFISISAGIVTFLLTLVEIPAFIQFYRKAQITGQQMHEDVKQHQAKAGTPTMGGLVFLITSVLVAFFFALFSSQFSNNVGMILFILVLY
GLVGFLDDFLKVFRKINEGLNPKQKLALQLLGGVIFYLFYERGGDILSVFGYPVHLGFFYIFFALFWLVGFSNAVNLTDGVDGLASI
SVVISLSAYGVIAYVQGQMDILLVILAMIGGLLGFFIFNHKPAKVFMGDVGSLALGGMLAAISMALHQEWTLLIIGIVYVFETTSVM
MQVSYFKLTGGKRIFRMTPVHHHFELGGLSGKGNPWSEWKVDFFFWGVGLLASLLTLAILYLMZ

(SEQ. ID. NO. 34)
LFKKNKDILNIALPAMGENFLQMLMGMVDSYLVAHLGLIAISGVSVAGNIITIYQAIFIALGAAISSVISKSIGQKDQSKLAYHVTEA
LKITLLLSFLLGFLSIFAGKEMIGLLGTERDVAESGGLYLSLVGGSIVLLGLMTSLGALIRATHNPRLPLYVSFLSNALNILFSSLAIFV
LDMGIAGVAWGTIVSRLVGLVILWSQLKLPYGKPTFGLDKELLTLALPAAGERLMMRAGDVVIIALVVSFGTEAVAGNAIGEVLT
QFNYMPAFGVATATVMLLARAVGEDDWKRVASLSKQTFWLSLFLMLPLSFSIYVLGVPLTHLYTTDSLAVEASVLVTLFSLLGTP
MTTGTVIYTAVWQGLGNARLPFYATSIGMWCIRIGTGYLMGIVLGWGLPGIWAGSLLDNGFRWLFLRYRYQRYMSLKGZ

(SEQ. ID. NO. 35)
MQTQEKHSQAAVLGLQHLLAMYSGSILVPIMIATALGYSAEQLTYLISTDIFMCGVATFLQLQLNKYFGIGLPVVLGVAFQSVAPLI
MIGQSHGSGAMFGALIASGIYVVLVSGIFSKVANLFPSIVTGSVITTIGLTLIPVAIGNMGNNVPEPTGQSLLLAAITVLIILLINIFTKG
FIKSISILIGLVVGTAIAATMGLVDFSPVAVAPLVHVPTPLYFGMPTFEISSIVMMCIIATVSMVESTGVYLALSDITKDPIDSTRLRNG
YRAEGLAVLLGGIFNTFPYTGFSQNVGLVKLSGIKKRLPIYYAAGFLVLLGLLPKFGALAQIIPSSVLGGAMLVMFGFVSIQGMQIL
ARVDFANNEHNFLIAAVSIAAGVGLNNSNLFVSMPTAFQMFFSNGIVVASLLAIVLNAVLNHKKKZ

(SEQ. ID. NO. 36)
MKDRIKEYLQDKGKVTVNDLAQALGKDSSKDFRELIKTLSLMERKHQIRFEEDGSLTLEIKKKHEITLKGIFHAHKNGFGFVSLEGE
EDDLFVGKNDVNYAIDGDTVEVVIKKVADRNKGTAAEAKIIDILEHSLTTVVGQIVLDQEKPKYAGYIRSKNQKISQPIYVKKPAL
KLEGTEVLKVFIDKYPSKKHDFFVASVLDVVGHSTDVGIDVLEVLESMDIVSEFPEAVVKEAESVPDAPSQKDMEGRLDLRDEITF
TIDGADAKDLDDAVHIKALKNGNLEFGVHIADVSYYVTEGSALDKEALNRATSVYVTDRVVPMLPERLSNGICSLNPQVDRLTQS
AIMEIDKHGRVVNYTITQTVIKTSFRMTYSDVNDILAGDEEKRKEYHKIVSSIELMAKLHETLENMRVKRGALNFDTNEAKILVDK
QGKPVDIVLRQRGIAERMIESFMLMANETVAEHFSKLDLPFIYRIHEEPKAEKVQKFIDYASSFGLRIYGTASEISQEALQDIMRAVE
GEPYADVLSMMLLRSMQQARYSEHNHGHYGLAADYYTHFTSPIRRYPDLLVHRMIRDYGRSKEIAEHFEQVIPEIATQSSNRERRA
IEAEREVEAMKKAEYMEEYVGEEYDAVVSSIVKFGLFVELPNTVEGLIHITNLPEFYHFNERDLTLRGEKSGITFRVGQQIRIRVERA
DKMTGEIDFSFVPSEFDVIEKGLKQSSRSGRGRDSNRRSDKKEDKRKSGRSNDKRKHSQKDKKKKGKKPFYKEVAKKGAKHGKG
RGKGRRTKZ

(SEQ. ID. NO. 37)
MGTTGFTIIDLIILIVYLLAVLVAGIYFSKKEMKGKEFFKGDGSVPWYVTSVSIFATMLSPISFLGLAGSSYAGSWILWFAQLGMVV
AIPLTIRFILPIFARIDIDTAYDYLDKRFNSKALRIISALLFIIYQLGRMSIIMYLPSAGLSVLTGIDINILIILMGVVAIVYSYTGGLKSVL

WTDFIQGVILISGVVLALFVLIANIKGGFGAVAETLANGKFLAANEKLFDPNLLSNSIFLIVMGSGFTILSSYASSQDLVQRFTTTQNI
KKLNKMLFTNGVLSLATATVFYLIGTGLYVFYQVQNADSAASNIPQDQIFMYFIAYQLPVGITGLILAAIYAASQSTISTGLNSVATS
WTLDIQDVISKNMSDNRRTKIAQFVSLAVGLFSIGVSIVMAHSDIKSAYEWFNSFMGLVLGLLGGVFILGFVSKKANKQGAYAALI
VSTIVMVFIKYFLPPTAVSYWAYSLISISVSVVSGYIVSVLTGNKVSAPKYTTIHDITEIKADSSWEVRHZ

(SEQ. ID. NO. 38)
MKFSKKYIAAGSAVIVSLSLCAYALNQHRSQENKDNNRVSYVDGSQSSQKSENLTPDQVSQKEGIQAEQIVIKITDQGYVTSHGDH
YHYYNGKVPYDALFSEELLMKDPNYQLKDADIVNEVKGGYIIKVDGKYYVYLKDAAHADNVRTKDEINRQKQEHVKDNEKVNS
NVAVARSQGRYTTNDGYVFNPADIIEDTGNAYIVPHGGHYHYIPKSDLSASELAAAKAHLAGKNMQPSQLSYSSTASDNNTQSVA
KGSTSKPANKSENLQSLLKELYDSPSAQRYSESDGLVFDPAKIISRTPNGVAIPHGDHYHFIPYSKLSALEEKIARMVPISGTGSTVST
NAKPNEVVSSLGSLSSNPSSLTTSKELSSASDGYIFNPKDIVEETATAYIVRHGDHFHYIPKSNQIGQPTLPNNSLATPSPSLPINPGTS
HEKHEEDGYGFDANRIIAEDESGFVMSHGDHNHYFFKKDLTEEQIKVRKNIZ

(SEQ. ID. NO. 39)
MKKRAIVAVIVLLLIGLDQLVKSYIVQQIPLGEVRSWIPNFVSLTYLQNRGAAFSILQDQQLLFAVITLVVVIGAIWYLHKHMEDSF
WMVLGLTLIIAGGLGNFIDRVSQGFVVDMFHLDFINFAIFNVADSYLTVGVIILLIAMLKEEINGNZ

(SEQ. ID. NO. 40)
MNTNLASFIVGLIIDENDRFYFVQKDGQTYALAKEEGQHTVGDTVKGFAYTDMKQKLRLTTLEVTATQDQFGWGRVTEVRKDLG
VFVDTGLPDKEIVVSLDILPELKELWPKKGDQLYIRLEVDKKDRIWGLLAYQEDFQRLARPAYNNMQNQNWPAIVYRLKLSGTFV
YLPENNMLGFIHPSERYAEPRLGQVLDARVIGFREVDRTLNLSLKPRSFEMLENDAQMILTYLESNGGFMTLNDKSSPDDIKATFGI
SKGQFKKALGGLMKAGKIKQDQFGTELIZ

(SEQ. ID. NO. 41)
MKDVSLFLLKKVFKSRLNWIVLALFVSVLGVTFYLNSQTANSHSLESRLESRIAANERAINENEEKLSQMSDTSSEEYQFAKNNLD
VQKNLLTRKTEILTLLKEGRWKEAYYLQWQDEEKNYEFVSNDPTASPGLKMGVDRERKIYQALYPLNIKAHTLEFPTHGIDQIVWI
LEVIIPSLFVVAIIFMLTQLFAERYQNHLDTAHLYPVSKVTFAISSLGVGVGYVTVLFIGICGFSFLVGSLISGFGQLDYPYPIYSLVNQ
EVTIGKIQDVLFPGLLLAFLAFIVIVEVVYLIAYFFKQKMPVLFLSLIGIVGLLFGIQTIQPLQRIAHLIPFTYLRSVEILSGRLPKQIDNV
DLNWSMGMVLLPCLIIFLLLGILFIERWGSSQKKEFFNRFZ

(SEQ. ID. NO. 42)
MMKFILDIVSTPAILVALIAILGLVLQKKKLPDIIKGGIKTFVGFLVVSGGAGIVQNSLNPFGTMFEHAFHLSGVVPNNEAIVAVALT
TYGSATAMIMFAGMVFNILIARFTRFKYIFLTGHHTLYMACMIAVILSVAGFTSLPLILLGGLALGIIMSISPAFVQKYMVQLTGNDK
VALGHFSSLGYWLSGFTGSLIGDKSKSTEDIKFPKSLAFLRDSTVSITLSMAVIYIIVAIFAGSEYIEKEISSGTSGLVYALQLAGQFAA
GVFVILAGVRLILGEIVPAFKGISERLVPNSKPALDCPIVYTYAPNAVLIGFISSFVGGLVSMVIMIASGTVVILPGVVPHFFCGATAG
VIGNASGGVRGATIGAFLQGILISFLPVFLMPVLGGLGFQGSTFSDADFGLSGIILGMLNQFGSQAGIVIGLVLILAVMFGVSFIKKPS
ATEEZ

(SEQ. ID. NO. 43)
MIKTFLSALSVILFSIPIITYSFFPSSNLNIWLSTQPILAQIYAFPLATATMAAILSFLFFFLSFYKKNKQIRFYSGILLLLSLILLLFGTDK
TLSSASNKTKTLKLVTWNVANQIEAQHIERIFSHFDADMAIFPELATNIRGEQENQRIKLLFHQVGLSMANYDIFTSPPTNSGIAPVT
VIVKKSYGFYTEAKTFHTTRFGTIVLHSRKQNIPDIIALHTAPPLPGLMEIWKQDLNIIHNQLASKYPKAIIAGDFNATMRHGALAKI
SSHRDALNALPPFERGTWNSQSPKLFNATIDHILLPKNHYYVKDLDIVSFQNSDHRCIFTEITFZ

(SEQ. ID. NO. 44)
MNPIQRSWAYVSRKRLRSFILFLILLVLLAGISACLTLMKSNKTVESNLYKSLNTSFSIKKIENGQTFKLSDLASVSKIKGLENVSPEL
ETVAKLKDKEAVTGEQSVERDDLSAADNNLVSLTALEDSSKDVTFTSSAFNLKEGRHLQKGDSKKILIHEELAKKNGLSLHDKIGL
DAGQSESGKGQTVEFEIIGIFSGKKQEKFTGLSSDFSENQVFTDYESSQTLLGNSEAQVSAARFYVENPKEMDGLMKQVENLALEN
QGYQVEKENKAFEQIKDSVATFQTFLTIFLYGMLIAGAGALILVLSLWLRERVYEVGILLALGKGKSSIFLQFCLEVVLVSLGALLP
AFVAGNAITTYLLQTLLASGDQASLQDTLAKASSLSTSILSFAESYVFLVLLSCLSVALCFLFLFRKSPKEILSSISZ

(SEQ. ID. NO. 45)
MLHNAFAYVTRKFFKSIVIFLIILLMASLSLVGLSIKGATAKASQETFKNITNSFSMQINRRVNQGTPRGAGNIKGEDIKKITENKAIE
SYVKRINAIGDLTGYDLIETPETKKNLTADRAKRFGSSLMITGVNDSSKEDKFVSGSYKLVEGEHLTNDDKDKILLHKDLAAKHG
WKVGDKVKLDSNIYDADNEKGAKETVEVTIKGLFDGHNKSAVTYSQELYENTAITDIHTAAKLYGYTEDTAIYGDATFFVTADK
NLDDVMKELNGISGINWKSYTLVKSSSNYPALEQSISGMYKMANLLFWGSLSFSVLLLALLLSLWINARRKEVGILLSIGLKQASIL
GQFITESILIAIPALVSAYFLANYTARAIGNTVLANVTSGVAKQASKAAQASNLGGGAEVDGFSKTLSSLDISIQTSDFIIIFVLALVLV
VLVMALASSNLLRKQPKELLLDGEZ

(SEQ. ID. NO. 46)
MSQDKQMKAVSPLLQRVINISSIVGGVGSLIFCIWAYQAGILQSKETLSAFIQQAGIWGPPLFIFLQILQTVVPIIPGALTSVAGVFIYG
HIIGTIYNYIGIVIGCAIIFYLVRLYGAAFVQSVVSKRTYDKYIDWLDKGNRFDRFFIFMMIWPISPADFLCMLAALTKMSFKRYMTII
ILTKPFTLVVYTYGLTYIIDFFWQMLZ

(SEQ. ID. NO. 47)
MRNMWVVIKETYLRHVESWSFFFMVISPFLFLGISVGIGHLQGSSMAKNNKVAVVTTVPSVAEGLKNVNGVNFDYKDEASAKEAI
KEEKLKGYLTIDQEDSVLKAVYHGETSLENGIKFEVTGTLNELQNQLNRSTASLSQEQEKRLAQTIQFTEKIDEAKENKKFIQTIAA
GALGFFLYMILITYAGVTAQEVASEKGTKIMEVVFSSIRASHYFYARMMALFLVILTHIGIYVVGGLAAVLLFKDLPFLAQSGILDH
LGDAISLNTLLFILISLFMYVVLAAFLGSMVSRPEDSGKALSPLMILIMGGFFGVTALGAAGDNLLLKIGSYIPFISTFFMPFRTINDY
AGGAEAWISLAITVIFAVVATGFIGRMYASLVLQTDDLGIWKTFKRALSYKZ

(SEQ. ID. NO. 48)
MTETIKLMKAHTSVRRFKEQEIPQVDLNEILTAAQMASSWKNFQSYSVIVVRSQEKKDALYELVPQEAIRQSAVFLLFVGDLNRAE
KGARLHTDTFQPQGVEGLLISSVDAALAGQNALLAAESLGYGGVIIGLVRYKSEEVAELFNLPDYTYSVFGMALGVPNQHHDMKP

RLPLENVVFEEEYQEQSTEAIQAYDRVQADYAGARATTSWSQRLAEQFGQAEPSSTRKNLEQKKLLZMLKLIAIVGTNSKRSTNR
QLLQYMQKHFTDKAEIELVEIKAIPVFNKPADKQVPAEILEIAAKIEEADGVIIGTPEYDHSIPAVLMSALAWLSYGIYPLLNKPIMIT
GASYGTLGSSRAQLQLRQILNAPEIKANVLPDEFLLSHSLQAFNPSGDLVDLDVIKKLDAIFDDFRIFVKITEKLRNAQELLRKDAED
FDWENLZ

(SEQ. ID. NO. 49)
MNTYQLNNGVEIPVLGFGTFKAKDGEEAYRAVLEALKAGYRHIDTAAIYQNEESVGQAIKDSGVPREEMFVTTKLWNSQQTYEQ
TRQALEKSIEKLGLDYLDLYLIHWPNPKPLRENDAWKTRNAEVWRAMEDLYQEGKIRAIGVSNFLPHHLDALLETATIVPAVNQV
RLAPGVYQDQVVAYCREKGILLEAWGPFGQGELFDSKQVQEIAANHGKSVAQIALAWSLAEGFLPLPKSVTTSRIQANLDCFGIEL
SHEERETLKTIAVQSGAPRVDDVDFZ

(SEQ. ID. NO. 50)
MRCKMLDPIAIQLGPLAIRWYALCIVTGLILAVYLTMKEAPRKKIIPDDILDFILVAFPLAILGARLYYVIFRFDYYSQNLGEIFAIWN
GGLAIYGGLITGALVLYIFADRKLINTWDFLDIAAPSVMIAQSLGRWGNFFNQEAYGATVDNLDYLPGFIRDQMYIEGSYRQPTFL
YESLWNLLGFALILIFRRKWKSLRRGHITAFYLIWYGFGRMVIEGMRTDSLMFFGFRVSQWLSVVLIGLGIMIVIYQNRKKAPYYIT
EEENZ

(SEQ. ID. NO. 51)
MGKLSSILLGTVSGAALALFLTSDKGKQVCSQAQDFLDDLREDPEYAKEQVCEKLTEVKEQATDFVLKTKEQVESGEITVDSILAQ
TKSYAFQATEASKNQLNNLKEQWQEKAEALDDSEEIVIDITEEZ

(SEQ. ID. NO. 52)
MKTKLIFWGSMLFLLSLSILLTIYLAWIFYPMEIQWLNLTNRVYLKPETIQYNFHILMNYLTNPFSQVLQMPDFRSSAAGLHHFAVV
KNLFHLVQLVALVTLPSFYVFVNRIVKKDFLSLYRKSLLALVVLPVMIGLGGVLIGFDQFFTLFHQILFVGDDTWLFDPAKDPVIMI
LPETFFLHAFLLFFALYENFFGYLYLKSRRKZ

(SEQ. ID. NO. 53)
MTYHFTEEYDIIVIGAGHAGVEASLAASRMGCKVLLATINIEMLAFMPCNPSIGGSAKGIVVREVDALGGEMAKTIDKTYIQMKML
NTGKGPAVRALRAQADKELYSKEMRKTVENQENLTLRQTMIDEILVEDGKVVGVRTATHQEYAAKAVIVTTGTALRGEIIIGDLK
YSSGPNHSLASINLADNLKELGLEIGRFKTGTPPRVKASSINYDVTEIQPGDEVPNHFSYTSRDEDYVKDQVPCWLTYTNGTSHEIIQ
NNLHRAPMFTGVVKGVGPRYCPSIEDKIVRFADKERHQLFLEPEGRNTEEVYVQGLSTSLPEDVQRDLVHSIKGLENAEMMRTGY
AIEYDMVLPHQLRATLETKKISGLFTAGQTNGTSGYEEAAGQGIIAGINAALKIQGKPELILKRSDGYIGVMIDDLVTKGTIEPYRLL
TSRAEYRLILRHDNADMRLTEMGREIGLVDDERWARFEIKKNQFDNEMKRLDSIKLKPVKETNAKVEEMGFKPLTDAVTAKEFLR
RPEVSYQDVVAFIGPAAEDLDDKIIELIETEIKYEGYISKAMDQVAKMKRMEEKRIPANIDWDDIDSIATEARQKFKLINPETIGQAS
RISGVNPADISILMVYLEGKNRSISKTLQKSKZ

(SEQ. ID. NO. 54)
MTKQVLLVDDEEHILKLLDYHLSKEGFSTQLVTNGRKALALAETEPFDFILLDIMLPQLDGMEVCKRLRAKGVKTPIMMVSAKSD
EFDKVLALELGADDYLTKPFSPRELLARVKAVLRRTKGEQEGDDSDNIADDSWLFGTLKVYPERHEVYKANKLLSLTPKEFESDK
NPFFEVFKVSKVTAQZ

(SEQ. ID. NO. 55)
MTTFKDGFLWGGAVAAHQLEGGWQEGGKGISVADVMTAGRHGVAREITLGVLEGKYYPNHEAIDFYHRYKEDIALFAEMGFKC
FRTSIAWTRIFPKGDELEPNEEGLQFYDNLFDECLKNGIEPVITLSHFEMPYHLVTEYGGWKNRKLIDFFARFAEVVFKRYKDKVK
YWMTFNEINNQANYQEDFAPFTNSGIVYEEGDNREAIMYQAAHYELVASARAVKIGHEINPDFQIGCMIAMCPIYPVTCNPKDILM
AMKAMQKRYYFADVHVLGKYPEHIFKYWERKGISVDFTAQDKEDLLGGTVDYIGFSYYMSFAIDSHRENNPYFDYLETEDLVKN
NYVKASEWEWQIDPEGLRYALNWFTDHYHLPLFIVENGFGAIDQVAADGMVHDDYRIEYLGAHIREMKKAVVEDGVDLMGYTP
WGCIDLVSAGTGEMRKRYGFIYVDKDDNGKGSYNRSPKKSFGWYKEVISSNGESVEZ

(SEQ. ID. NO. 56)
MDQQNGLFGFLENHVMGPMGKLAQFKVVRAITAAGMAAVPFTIVGSMFLVFSILPQAFSFWPIVADIFSASFDKFTSLYMVANYA
TMGSLSLYFVLSLAYELTKIYAEEEELNMNPLNGALLALMAFVMTVPQIIFDGGMMKTVTSLKEGAVIADGWAMGNVVARFGTT
GIFTAIIMAIVTVLIYRMCVKHNWVIKMPEAVPEGVSRGFTALVPGFVVAFVVIFINGLLVAMGTDIFKVIAIPFGFVSNLTNSWIGL
MIIYLLTQLLWIVGIHGANIVFAFVSPIALANMAENAAGGHFAVAGEFSNMFVIAGGSGATLGLCLYIAFASKSEQLKAIGRASVVP
ALFNINEPLIFGLPIIYNPALAIPFILAPMVTATIYYVANSLNFIKPIIAQVPWPTPVGIGAFLGTADLRAVLVALVCAFAAFLVYLPFIR
VYDQKLVKEEQGIZ

(SEQ. ID. NO. 57)
MKKFYVSPIFPILVGLIAFGVLSTFIIFVNNNLLTVLILFLFVGGYVFLFKKLRVHYTRSDVEQIQYVNHQAEESLTALLEQMPVGVM
KLNLSSGEVEWFNPYAELILTKEDGDFDLEAVQTIIKASVGNPSTYAKLGEKRYAVHMDASSGVLYFVDVSREQAITDELVTSRPV
IGIVSVDNYDDLEDETSESDISQINSFVANFISEFSEKHMMFSRRVSMDRFYLFTDYTVLEGLMNDKFSVIDAFREESKQRQLPLTLS
MGFSYGDGNHDEIGKVALLNLNLAEVRGGDQVVVKENDETKNPVYFGGGSAASIKRTRTRTRAMMTAISDKIRSVDQVFVVGHK
NLDMDALGSAVGMQLFASNVIENSYALYDEEQMSPDIERAVSFIEKEGVTKLLSVKDAMGMVTNRSLLILVDHSKTALTLSKEFY
DLFTQTIVIDHHRRDQDFPDNAVITYIESGASSASELVTELIQFQNSKKNRLSRMQASVLMAGMMLDTKNFTSRVTSRTFDVASYL
RTRGSDSIAIQEIAATDFEEYREVNELILQGRKLGSDVLIAEAKDMKCYDTVVISKAADAMLAMSGIEASFVLAKNTQGFISISARSR
SKLNVQRIMEELGGGGHFNLAAAQIKDVTLSEAGEKLTEIVLNEMKEKEKEEZ

(SEQ. ID. NO. 58)
MKEKNMWKELLNRAGWILVFLLAVLLYQVPLVVTSILTLKEVALLQSGLIVAGLSIVVLALFIMGARKTKLASFNFSFFRAKDLAR
LGLSYLVIVGSNILGSILLQLSNETTTANQSQINDMVQNSSLISSFFLLALLAPICEEILCRGIVPKKIFRGKENLGFVVGTIVFALLHQP
SNLPSLLIYGGMSTVLSWTAYKTQRLEMSILLHMIVNGIAFCLLALVVIMSRTLGISVZ

(SEQ. ID. NO. 59)

MKEKNMWKELLNRAGWILVFLLAVLLYQVPLVVTSILTLKEVALLQSGLIVAGLSIVVLALFIMGARKTKLASFNFSFFRAKDLAR
LGLSYLVIVGSNILGSILLQLSNETTTANQSQINDMVQNSSLISSFFLLALLAPICEEILCRGIVPKKIFRGKENLGFVVGTIVFALLHQP
SNLPSLLIYGGMSTVLSWTAYKTQRLEMSILLHMIVNGIAFCLLALVVIMSRTLGISVZ

(SEQ. ID. NO. 60)
MDTQKIEAAVKMIIEAVGEDANREGLQETPARVARMYQEIFSGLGQTAEEHLSKSFEIIDDNMVVEKDIFFHTMCEHHFLPFYGRA
HIAYIPDGRVAGLSKLARTVEVYSKKPQIQERLNIEVADALMDYLGAKGAFVVIEAEHMCMSMRGVRKPGTATLTTVARGLFETD
KDLRDQAYRLMGLZMKDLFLKRKQAFRKECLGYLRYVLNDHFVLFLLVLLGFLAYQYSQLLQHFPENHWPILLFVGITSVLLLLW
GGTATYMEAPDKLFLLVGEEEIKLHLKRQTGISLVFWLFVQTLFLLLFAPLFLAMGYGLPVFLLYVLLLGVGKYFHFCQKASKFFT
ETGLDWDYVISQESKRKQVLLRFFALFTQVKGISNSVKRRAYLDFILKAVQKVPGKIWQNLYLRSYLRNGDLFALSLRLLLLSLLA
QVFIEQAWIATAVVVLFNYLLLFQLLALYHAFDYQYLTQLFPLDKGQKEKGLQEVVRGLTSFVLLVELVVGLITFQEKLALLALLG
AGLVLLVLYLPYQVKRQMQDZ

(SEQ. ID. NO. 61)
MRKSIVLAADNAYLIPLETTIKSVLYHNRDVDFYILNSDIAPEWFKLLGRKMEVVNSTIRSVHIDKELFESYKTGPHINYASYFRFFA
TEVVESDRVLYLDSDIIVTGELATLFEIDLKGYSIGAVDDVYAYEGRKSGFNTGMLLMDVAKWKEHSIVNSLLELAAEQNQVVHL
GDQSILNIYFEDNWLALDKTYNYMVGIDIYHLAQECERLDDNPPTIVHYASHDKPWNTYSISRLRELWWVYRDLDWSEIAFQRSD
LNYFERSNQSKKQVMLVTWSADIKHLEYLVQRLPDWHFHLAAPCDCSEELTSLSQYTNVTVYQNVLHSRIDWLLDDSIVYLDINT
GGEVFNVVTRAQESGKKIFAFDITRKSMDDGLYDGIFSVERPDDLVDRMKNIEIEZ

(SEQ. ID. NO. 62)
MTKIYSSIAVKKGLFTSFLLFIYVLGSRIILPFVDLNTKDFLGGSTAYLAFSAALTGGNLRSLSIFSVGLSPWMSAMILWQMFSFSKRL
GLTSTSIEIQDRRKMYLTLLIAVIQSLAVSLRLPVQSSYSAILVVLMNTILLIAGTFFLVWLSDLNASMGIGGSIVILLSSMVLNIPQDV
LETFQTVHIPTGIIVLLALLTLVFSYLLALMYRARYLVPVNKIGLHNRFKRYSYLEIMLNPAGGMPYMYVMSFLSVPAYLFILLGFIF
PNHSGLAALSKEFMVGKPLWVYVYISVLFLFSIIFAFVTMNGEEIADRMKKSGEYIYGIYPGADTSRFINRLVLRFSVIGGLFNVIMA
GGPMLFVLFDEKLLRLAMIPGLFMMFGGMIFTIRDEVKALRLNETYRPLIZ

(SEQ. ID. NO. 63)
MSSLSDQELVAKTVEFRQRLSEGESLDDILVEAFAVVREADKRILGMFPYDVQVMGAIVMHYGNVAEMNTGEGKTLTATMPVYL
NAFSGEGVMVVTPNEYLSKRDAEEMGQVYRFLGLTIGVPFTEDPKKEMKAEEKKLIYASDIIYTTNSNLGFDYLNDNLASNEEGKF
LRPFNYVIIDEIDDILLDSAQTPLIIAGSPRVQSNYYAIIDTLVTTLVEGEDYIFKEEKEEVWLTTKGAKSAENFLGIDNLYKEEHASF
ARHLVYAIRAHKLFTKDKDYIIRGNEMVLVDKGTGRLMEMTKLQGGLHQAIEAKEHVKLSPETRAMASITYQSLFKMFNKISGMT
GTGKVAEKEFIETYNMSVVRIPTNRPRQRIDYPDNLYITLPEKVYASLEYIKQYHAKGNPLLVFVGSVEMSQLYSSLLFREGIAHNV
LNANNAAREAQIISESGQMGAVTVATSMAGRGTDIKLGKGVAELGGLIVIGTERMESQRIDLQIRGRSGRQGDPGMSKFFVSLEDD
VIKKFGPSWVHKKYKDYQVQDMTQPEVLKGRKYRKLVEKAQHASDSAGRSARRQTLEYAESMNIQRDIVYKERNRLIDGSRDLE
DVVVDIIERYTEEVAADHYASRELLFHFIVTNISFHVKEVPDYIDVTDKTAVRSFMKQVIDKELSEKKELLNQHDLYEQFLRLSLLK
AIDDNWVEQVDYLQQLSMAIGGQSASQKNPIVEYYQEAYAGFEAMKEQIHADMVRNLLMGLVEVTPKGEIVTHFPZ

(SEQ. ID. NO. 64)
MIGTFAAALVAVLANFIVPIEITPNSANTEIAPPDGIGQVLSNLLLKLVDNPVNALLTANYIRILSWAVIFGIAMREASKNSQELLKTI
ADVTSKIVEWIINLAPFGILGLVFKTISDKGVGSLANYGILLVLLVTTMLFVAPVVNPLIAFFFMRRNPYPLVWNCLRVSGVTAFFTR
SSATNIPVNMKLCHDLGLNPDTYSVSIPLGSTINMAGVAITINLLTLAAVNTLGIPVDFATAFVLSVVAAISSCDASGIAGGSLLLIPV
ACSLFGISNDIAIQIVGVGFVIGVIQDSCETALNSSTDVLFTAVAEYAATRKKZ

(SEQ. ID. NO. 65)
MSISQRTTKLILATCLACLLAYFLNLSSAVSAGIIALLSLSDTRRSTLKLARNRLFSMLLALAIGVLAFHLSGFHIWSLGLYLAFYVPL
AYKMGWEIGITPSTVLVSHLLVQESTSPDLLVNEFLLFAIGTGFALLVNLYMPSREEEIQHYHTLVEEKLKDILQRFKYYLSRGDGR
NRAQLVAELDTLLKEALRLVYLDHSDHLFHQTDYHIHYFEMRQRQSRILRNMAQQINTCHLAASESLILAQLFSKIAGQLSQTNPA
SDLLLDEIERYLEVFRNRSLPKTREEFETRATLLQLLREAKTFIQVKVDFYQKYRQZ

(SEQ. ID. NO. 66)
MEIMSLAIAVFAVIIGLVIGYVSISAKMKSSQEAAELMLLNAEQEATNLRGQAEREADLLVNEAKRESKSLKKEALLEAKEEARKY
REEVDAEFKSERQELKQIESRLTERATSLDRKDDNLTSKEQTLEQKEQSISDRAKNLDAREEQLEEVERQKEAELERIGALSQAEAR
DIILAQTEENLTREIASRIREAEQEVKERSDKMAKDILVQAMQRIAGEYVAESTNSTVHLPDDTMKGRIIGREGRNIRTFESLTGVDV
IIDDTPEVVTLSGFDPIRREIARMTMEMLLKDGRIHPARIEELVEKNRQEIDNKIREYGEAAAYEIGAPNLHPDLMKIMGRLQFRTSY
GQNVLRHSIEVAKLAGIMASELGENAALARRAGFLHDIGKAIDHEVEGSHVEIGMELARKYKEPPVVVNTIASHHGDVEAESVIAV
IVAAADALSAARPGARSESLESYIKRLHDLEEIANGFEGVQTSFALQAGREIRIMVNPGKIKDDKVTILAHKVRKKIENNLDYPGNI
KVTVIRELRAVDYAKZ

(SEQ. ID. NO. 67)
MMLKPSIDTLLDKVPSKYSLVILEAKRAHELEAGAPATQGFKSEKSTLRALEEIESGNVTIHPDPEGKREAVRRRIEEEKRRKEEEEK
KIKEQIAKEKEDGEKIZ

(SEQ. ID. NO. 68)
MSAYQLPTVWQDEASNQGAFTGLNRPTAGARFEQNLPKGEQAFQLYSLGTPNGVKVTILLEELLEAGFKEAAYDLYKIAIMDGDQ
FGSDFVKLNPNSKIPALLDQSGTENVRVFESAHILLYLAEKFGAFLPSNPVEKVEVLNWLFWQAGAAPFLGGGFGHFFNYAPEKLE
YPINRFTMEVKRQLDLLDKELAQKPYIAGNDYTIADIAIWSWYGQLVQGNLYQGSAKFLDASSYQNLVKWAEKIANRPAVKRGL
EVTYTEIKZ

(SEQ. ID. NO. 69)
LASLITSIIMFYVGFDVLRDTIQKILSREETVIDPLGATLGIISAAIMFVVYLYNTRLSKKSNSNALKAAAKDNLSDAVTSLGTAIAILA
SSFNYPIVDKLVAIIITFFILKTAYDIFIESSFSLSDGFDDRLLEDYQKAIMEIPKISKVKSQRGRTYGSNIYLDITLEMNPDLSVFESHEI
ADQVESMLEERFGVFDTDVHIEPAPIPEDEILDNVYKKLLMREQLIDQGNQLEELLTDDFVYIRQDGEQMDKEAYKTKKELNSAIK
DIQITSISQKTKLICYELDGIIHTSIWRRHETWQNIFHQETKKEZ

(SEQ. ID. NO. 70)
MTIKLVATDMDGTFLDGNGRFDMDRLKSLLVSYKEKGIYFAVASGRGFLSLEKLFAGVRDDIIFIAENGSLVEYQGQDLYEATMS
RDFYLATFEKLKTSPYVDINKLLLTGKKGSYVLDTVDETYLKVSQHYNENIQKVASLEDITDDIFKFTTNFTEETLEDGEAWVNEN
VPGVKAMTTGFESIDIVLDYVDKGVAIVELVKKLGITMDQVMAFGDNLNDLHMMQVVGHPVAPENARPEILELAKTVIGHHKER
SVIAYMEGLZ

(SEQ. ID. NO. 71)
MADIKLIALDLDGTLLTTDKRLTDRTKETLQAARDRGIKVVLTTGRPLKAMDFFLHELGTDGQEDEYTITFNGGLVQKNTGEILDK
TVFSYDDVARLYEETEKLSLPLDAISEGTVYQIQSDQESLYAKFNPALTFVPVDFEDLSSQMTYNKCVTAFAQEPLDAAIQKISPELF
DQYEIFKSREMLLEWSPKNVHKATGLAKLISHLGIDQSQVMACGDEANDLSMIEWAGLGVAMQNAVPEVKAAANVVTPMTNDE
EAVAWAIEEYVLKENZ

(SEQ. ID. NO. 72)
MESLLILLLIANLAGLFLIWQRQDRQEKHLSKSLEDQADHLSDQLDYRFDQARQASQLDQKDLEVVVSDRLQEVRIELHQGLTQV
RQEMTDNLLQTRDKTDQRLQALQESNEQRLEQMRQTVEEKLEKTLQTRLQASFETVSKQLESVNRGLGEMQTVARDVGALNKV
LSGTKTRGILGELQLGQIIEDIMTPAQYEREYATVENSSERVEYAIKLPGQGDQEYVYLPIDSKFPLADYYRLEEAYETGDKDEIERC
RKSLLASVKRFARDIRNKYIAPPRTTNFGVLFVPTEGLYSEIVRNPVFFDDLRREEQIIVAGPSTLSALLNSLSVGFKTLNIQKSADHIS
KTLASVKTEFGKFGGILVKAQKHLQHASGNIDELLNRRTIAIERTLRHIELSEGEPALDLLHFQENEEEYEDZ

(SEQ. ID. NO. 73)
MKISHMKKDELFEGFYLIKSADLRQTRAGKNYLAFTFQDDSGEIDGKLWDAQPHNIEAFTAGKVVHMKGRREVYNNTPQVNQIT
LRLPQAGEPNDPADFKVKSPVDVKEIRDYMSQMIFKIENPVWQRIVRNLYTKYDKEFYSYPAAKTNHHAFETGLAYHTATMVRL
ADAISEVYPQLNKSLLYAGIMLHDLAKVIELTGPDQTEYTVRGNLLGHIALIDSEITKTVMELGIDDTKEEVVLLRHVILSHHGLLE
YGSPVRPRIMEAEIIHMIDNLDASMMMMSTALALVDKGEMTNKIFAMDNRSFYKPDLDZ

(SEQ. ID. NO. 74)
MSEKAKKGFKMPSSYTVLLIIIAIMAVLTWFIPAGAFIEGIYETQPQNPQGIWDVLMAPIRAMLGTHPEEGSLIKETSAAIDVAFFILM
VGGFLGIVNKTGALDVGIASIVKKYKGREKMLILVLMPLFALGGTTYGMGEETMAFYPLLVPVMMAVGFDSLTGVAIILLGSQIGC
LASTLNPFATGIASATAGVGTGDGIVLRLIFWVTLTALSTWFVYRYADKIQKDPTKSLVYSTRKEDLKHFNVEESSSVESTLSSKQK
SVLFLFVLTFILMVLSFIPWTDLGVTIFDDFNTWLTGLPVIGNIVGSSTSALGTWYFPEGAMLFAFMGILIGVIYGLKEDKIISSFMNG
AADLLSVALIVAIARGIQVIMNDGMITDTILNWGKEGLSGLSSQVFIVVTYIFYLPMSFLIPSSSGLASATMGIMAPLGEFVNVRPSLII
TAYQSASGVLNLIAPTSGIVMGALALGRINIGTWWKFMGKLVVAIIVVTIALLLLGTFLPFLZ

(SEQ. ID. NO. 75)
MSNSFVKLLVSQLFANLADIFFRVTIIANIYIISKSVIATSLVPILIGISSFVASLLVPLVTKRLALNRVLSLSQFGKTILLAILVGMFTV
MQSVAPLVTYLFVVAISILDGFAAPVSYAIVPRYATDLGKANSALSMTGEAVQLIGWGLGGLLFATIGLLPTTCINLVLYIISSFLML
FLPNAEVEVLESETNLEILLKGWKLVARNPRLRLFVSANLLEIFSNTIWVSSIILVFVTELLNKTESYWGYSNTAYSIGIIISGLIAFRLS
EKFLAAKWEPQLFTPNLKTIQNPCLSLDPGWFLFSPNGCFLLDKKEFPLYGISVEKNTKRKETHMNSLPNHHFQNKSFYQLSFDGG
HLTQYGGLIFFQELFSQLKLKERISKYLVTNDQRRYCRYSDSDILVQFLFQLLTGYGTDYACKELSADAYFPKLLEGGQLASQPTLS
RFLSRTDEETVHSLRCLNLELVEFFLQFHQLNQLIVDIDSTHFTTYGKQEGVAYNAHYRAHGYHPLYAFEGKTGYCFNAQLRPGN
RYCSEEADSFITPVLERFNQLLFRMDSGFATPKLYDLIEKTGQYYLIKLKKNTVLSRLGDLSLPCPQDEDLTILPHSAYSETLYQAGS
WSHKRRVCQFSERKEGNLFYDVISLVTNMTSGTSQDQFQLYRGRGQAENFIKEMKEGFFGDKTDSSTLIKNEVRMMMSCIAYNLY
LFLKHLAGGDFQTLTIKRFRHLFLHVVGKCVRTGRKQLLKLSSLYAYSELFSALYSRIRKVNLNLPVPYEPPRRKASLMMHZ

(SEQ. ID. NO. 76)
MMEFFQQLPHLEPYGNPQYFVYVIAATLPIFIGLFFKKRFAWYEVLVSLFFIVTMLVGGKTNQLAALGIYLCWEILLLLFYKHYRKS
KDGKWVFYLVSFLSLLPIIFVKVQPAINGTQSLLGFLGISYLTFRSVGIVIELRDGVIKDFTLWEFLRFLLFMPTFSSGPIDRFKRFNEN
YQAIPERDELMDMLDESVRYIMWGFLYKFILAHVLGETLLPPLKNLALQSGGFFNLYALAVMYTFGLELFFDFAGYSMFALAISNL
MGIRSPINFNKPFLSRDLKEFWNRWHMSLSFWFRDFVFMRMVMVLTRKKVFKNRNVTSSMAYIVNMLIMGFWHGVTWYYIAYG
LFHGLGLVINDAWVRKKKTLNKERKKAGKAALPENRWIQLLGMVVTFHVVMLSFLIFSGFLNNLWFKKZ

(SEQ. ID. NO. 77)
MLKRLWMIFGPVLIAGLLVFLLIFFYPTEMHHNLGAEKRSAVATTIDSFKERSQKVRALSDPNVRFVPFFGSSEWLRFDGAHPAVL
AEKYNRSYRPYLLGQGGAASLNQYFGMQQMLPQLENKQVVYVISPQWFSKNGYDPAAFQQYFNGDQLTSFLKHQSGDQASQYA
ATRLLQQFPNVAMKDLVQKLASKEELSTADNEMIELLARFNERQASFFGQFSVRGYVNYDKHVAKYLKILPDQFSYQAIEDVVKA
DAEKNTSNNEMGMENYFYNEQIKKDLKKLKDSQKSFTYLKSPEYNDLQLVLTQFSKSKVNPIFIIPPVNKKWMNYAGLREDMYQ
QTVQKIRYQLESQGFTNIADFSKDGGEPFFMKDTIHLGWLGWLAFDKAVDPFLSNPTPAPTYHLNERFFSKDWATYDGDVKEFQZ

(SEQ. ID. NO. 78)
MEKNLKALKQTTDQEGPAIEPEKAEDTKTVQNGYFEDAAVKDRTLSDYAGNWQSVYPFLEDGTFDQVFDYKAKLTGKMTQAEY
KAYYTKGYHTDVTKINITDNTMEFVQGGQSKKYTYKYVGKKILTYKKGNRGVRFLFEATDADAGQFKYVQFSDHNVAPVKAEH
FHIFFGGTSQEALFEEMDNWPTYYPDNLSGQEIAQEMLAHZ

(SEQ. ID. NO. 79)
MKDGHLLAHHIRLLNGRIFQKLLSQDPEALYRGEQGKILAVLWNSETGCATATDIALATGLANNTLTTMIKKLEEQKLVIVSPCGK
DKRKKYLVLTELGKSQKEVGHRVSQKLDTIFYKGFSEEEIHQFEGFQERILANLKEKGNEVZ

(SEQ. ID. NO. 80)
MTNLIATFQDRFSDWLTALSQHLQLSLLTLLLAILLAIPLAVFLRYHEKLADWVLQIAGIFQTIPSLALLGLFIPLMGIGTLPALTALV
IYAIFPILQNTITGLKGIDPNLQEAGIAFGMTRWERLKKFEIPLAMPVIMSGIRTAAVLIIGTATLAALIGAGGLGSFILLGIDRNNASLI
LIGALSSAVLAIAFNFLLKVMEKAKLRTIFSGFALVALLLGLSYSPALLVQKEKENLVIAGKIGPEPEILANMYKLLIEENTSMTATV
KPNFGKTSFLYEALKKGDIDIYPEFTGTVTESLLQPSPKVSHEPEQVYQVARDGIAKQDHLAYLKPMSYQNTYAVAVPKKIAQEYG
LKTISDLKKVEGQLKAGFTLEFNDREDGNKGLQSMYGLNLNVATIEPALRYQAIQSGDIQITDAYSTDAELERYDLQVLEDDKQLF
PPYQGAPLMKEALLKKHPELERVLNTLAGKITESQMSQLNYQVGVEGKSAKQVAKEFLQEQGLLKKZ

(SEQ. ID. NO. 81)
MMHTYLQKKIENIKTTLGEMSGGYRRMVAAMADLGFSGTMKAIWDDLFAHRSFAQWIYLLVLGSFPLWLELVYEHRIVDWIGMI
CSLTGIICVIFVSEGRASNYLFGLINSVIYLILALQKGFYGEVLTTLYFTVMQPIGLLVWIYQAQFKKEKQEFVARKLDGKGWTKYL
SISVLWWLAFGFIYQSIGANRPYRDSITDATNGVGQILMTAVYREQWIFWAATNVFSIYLWWGESLQIQGKYLIYLINSLVGWYQ
WSKAAKQNTDLLNZ

(SEQ. ID. NO. 82)
MRNMKAKYAVWVAFFLNLTYAIVEFIAGGVFGSSAVLADSVHDLGDAIAIGISAFLETISNREEDNQYTLGYKRFSLLGALVTAVI
LVTGSVLVILENVTKILHPQPVNDEGILWLGIIAITINLLASLVVGKGKTKNESILSLHFLEDTLGWVAVILMAIVLRFTDWYILDPLL
SLVISFFILSKALPRFWSTLKIFLDAVPEGLDIKQVKSGLERLDNVASLNQLNLWTMDALEKNAIVHVCLKEMEHMETCKESIRIFL
KDCGFQNITIEIDADLETHQTHKRKVCDLERSYEHQHZ

(SEQ. ID. NO. 83)
MIEYKNVALRYTEKDVLRDVNLQIEDGEFMVLVGPSGSGKTTMLKMINRLLEPTDGNIYMDGKRIKDYDERELRLSTGYVLQAIA
LFPNLTVAENIALIPEMKGWSKEEITKKTEELLAKVGLPVAEYGHRLPSELSGGEQQRVGIVRAMIGQPKIFLMDEPFSALDAISRK
QLQVLTKELHKEFGMTTIFVTHDTDEALKLADRIAVLQDGEIRQVANPETILKAPATDFVADLFGGSVHDZ

(SEQ. ID. NO. 84)
MSAVAISAMTKVMQETHGNPSSIHGHGRQAGKLLREARQELAQLLRTKPQHIFFTSGGTEGNNTTIIGYCLRHQEQGKHIITTAIEH
HAVLETIDYLVQHFGFEATIIQPENQEITAQQIQKALRDDTILVSTMFVNNETGNLLPIAEIGQILKQHPAAYHVDAVQAIGKIPIHSE
ELGIDFLTASAHKFHGPKGIGFLYASSMDFDSYLHGGDQEQKKRAGTENLPAIVGMVAALKEDLEKQEEHFQHVQNLETAFLAEL
EGIQYYLNRGKHHLPYVLNIGFPGQKNDLLLLRLDLAGISISTGSACTAGVVQSSHVLEAMYGANSERLKESLRISLSPQNTVEDLQ
TLAKTLKEIIGGZ

(SEQ. ID. NO. 85)
MLFKLSKEKIELGLSRLSPARRIFLSFALVILLGSLLLSLPFVQVESSRATYFDHLFTAVSAVCVTGLSTLPVAHTYNIWGQIICLLLIQ
IGGLGLMTFIGVFYIQSKQKLSLRSRATIQDSFSYGETRSLRKFVYSIFLTTFLVESLGAILLSFRLIPQLGWGRGLFSSIFLAISAFCNA
GFDNLGSTSLFAFQTDLLVNLVIAGLIITGGLGFMVWFDLAGHVGRKKKGRLHFHTKLVLLLTIGLLLFGTATTLFLEWNNAGTIG
NLPVADKVLVSFFQTVTMRTAGFSTIDYTQAHPVTLLIYILQMFLGGAPGGTAGGLKITTFFVLLVFARSELLGLPHANVARRTIAP
RTVQKSFSVFIIFLMSFLIGLILLGITAKGNPPFIHLVFETISALSTVGVTANLTPDLGKLALSVIMPLMFMGRIGPLTLFVSLADYHPE
KKDMIHYMKADISIGZ

(SEQ. ID. NO. 86)
MSDRTIGILGLGIFGSSVLAALAKQDMNIIAIDDHAERINQFEPVLARGVIGDITDEELLRSAGIDTCDTVVVATGENLESSVLAVMH
CKSLGVPTVIAKVKSQTAKKVLEKIGADSVISPEYEMGQSLAQTILFHNSVDVFQLDKNVSIVEMKIPQSWAGQSLSKLDLRGKYN
LNILGFREQENSPLDVEFGPDDLLKADTYILAVINNQYLDTLVALNSZ

(SEQ. ID. NO. 87)
MKLLSIAISSYNAAAYLHYCVESLVIGGEQVGILIINDGSQDQTQEIAECLASKYPNIVRAIYQENKCHGGAVNRGLVEASGRYFKV
VDSDDWVDPRAYLKILETLQELESKGQEVDVFVTNFVYEKEGQSRKKSMSYDSVLPVRQIFGWDQVGNFSKGQYTMMHSLIYRT
DLLRASQFZ

(SEQ. ID. NO. 88)
MKFNPNQRYTRWSIRRLSVGVASVVVASGFFVLVGQPSSVRADGLNPTPGQVLPEETSGTKEGDLSEKPGDTVLTQAKPEGVTGN
TNSLPTPTERTEVSEETSPSSLDTLFEKDEEAQKNPELTDVLKETVDTADVDGTQASPAETTPEQVKGGVKENTKDSIDVPAAYLEK
AEGKGPFTAGVNQVIPYELFAGDGMLTRLLLKASDNAPWSDNGTAKNPALPPLEGLTKGKYFYEVDLNGNTVGKQGQALIDQLR
ANGTQTYKATVKVYGNKDGKADLTNLVATKNVDININGLVAKETVQKAVADNVKDSIDVPAAYLEKAKGEGPFTAGVNHVIPY
ELFAGDGMLTRLLLKASDKAPWSDNGDAKNPALSPLGENVKTKGQYFYQVALDGNVAGKEKQALIDQFRANGTQTYSATVNVY
GNKDGKPDLDNIVATKKVTININGLISKETVQKAVADNVKDSIDVPAAYLEKAKGEGPFTAGVNHVIPYELFAGDGMLTRLLLKA
SDKAPWSDNGDAKNPALSPLGENVKTKGQYFYQLALDGNVAGKEKQALIDQFRANGTQTYSATVNVYGNKDGKPDLDNIVATK
KVTININGLISKETVQKAVADNVKTVSMFQQPTZ

(SEQ. ID. NO. 89)
MKLKSYILVGYIISTLLTILVVFWAVQKMLIAKGEIYFLLGMTIVASLVGAGISLFLLLPVFTSLGKLKEHAKRVAAKDFPSNLEVQG
PVEFQQLGQTFNEMSHDLQVSFDSLEESEREKGLMIAQLSHDIKTPITSIQATVEGILDGIIKESEQAHYLATIGRQTERLNKLVEELN
FLTLNTARNQVETTSKDSIFLDKLLIECMSEFQFLIEQERRDVHLQVIPESARIEGDYAKLSRILVNLVDNAFKYSAPGTKLEVVAKL
EKDQLSISVTDEGQGIAPEDLENIFKRLYRVETSRNMKTGGHGLGLAIARELAHQLGGEITVSSQYGLGSTFTLVLNLSGSENKAZ

(SEQ. ID. NO. 90)
MFGQTAQHGLTNSLKDFWIFLLNIGPQLAFFCQMLRCSRSVEQGTGNHRREFNMIQQIFSHFGMTHLGQIKLVYQESIDLELLVNA
LNHHLLIDRLVLTPNQITIEIDRQIVHGLDLLKGRKDKEIIDIKSMFRQLELASTQQICPINQRVHHGILAFGEISDLVPAKNLPNRQDZ

(SEQ. ID. NO. 91)
MEHLATYFSTYGGAFFAALGIVLAVGLSGMGSAYGVGKAGQSAAALLKEQPEKFASALILQLLPGTQGLYGFVIGILIWLQLTPEL
PLEKGVAYFFVALPIAIVGYFSAKHQGNVAVAGMQILAKRPKEFMKGAILAAMVETYAILAFVVSFILTLRVZ

(SEQ. ID. NO. 92)
MLKSEKQSRYQMLNEELSFLLEGETNVLANLSNASALIKSRFPNTVFAGFYLFDGKELVLGPFQGGVSCIRIALGKGVCGEAAHFQ
ETVIVGDVTTYLNYISCDSLAKSEIVVPMMKNGQLLGVLDLDSSEIEDYDAMDRDYLEQFVAILLEKTAWDFTMFEEKSZ

(SEQ. ID. NO. 93)
MSVLEIKDLHVEIEGKEILKGVNLTLKTGEIAAIMGPNGTGKSTLSAAIMGNPNYEVTKGEVLFDGVNILELEVDERARMGLFLAM
QYPSEIPGITNAEFLRAAMNAGKEDDEKISVREFITKLDEKMELLNMKEEMAERYLNEGFSGGEKKRNEILQLLMLEPTFALLDEID
SGLDIDALKVVSKGVNAMRGEGFGAMIITHYQRLLNYITPDVVHVMMEGRVVLSGGPELAARLEREGYAKLAEELGYDYKEELZ

(SEQ. ID. NO. 94)
MPYKRQRSFSMALSKLDSLYMAVVADHSKNPHHQGKLEDAEQISLNNPTCGDVINLSVKFDAEDRLEDIAFLNSGCTISTASASM
MTDAVLGKTKQEILELATIFSEMVQGQKDERQDQLGDAAFLSGVAKFPQRIKCATLAWNALKKTIENQEKQZ

(SEQ. ID. NO. 95)
MKIQDLLRKDVMLLDLQATEKTAVIDEMIKNLTDHGYVTDFETFKEGILAREALTSTGLGDGIAMPHSKNAAVKEATVLFAKSNK
GVDYESLDGQATDLFFMIAAPEGANDTHLAALAELSQYLMKDGFADKLRQATSADQVIELFDQASEKTEELVQAPANDSGDFIVA
VTACTTGIAHTYMAQEALQKVAAEMGVGIKVETNGASGVGNQLTAEDIRKAKAIIIAADKAVEMDRFDGKPLINRPVADGIRKTE
ELINLALSGDTEVYRAANGAKAATASNEKQSLGGALYKHLMSGVSQMLPFVIGGGIMIALAFLIDGALGVPNENLGNLGSYHELA
SMFMKIGGAAFGLMLPVFAGYVAYSIAEKPGLVAGFVAGAIAKEGFAFGKIPYAAGGEATSTLAGVSSGFLGALVGGFIAGALVL
AIKKYVKVPRSLEGAKSILLLPLLGTILTGFVMLAVNIPMAAINTAMNDFLGGLGGGSAVLLGIVLGGMMAVDMGGPVNKAAYV
FGTGTLAATVSSGGSVAMAAVMAGGMVPPLAIFVATLLFKDKFTKEERNSGLTNIIMGLSFITEGAIPFGAADPARAIPSFILGSAVA
GGLVGLTGIKLMAPHGGIFVIALTSNALLYLVSVLVGAIVSGVVYGYLRKPQAZ

(SEQ. ID. NO. 96)
MANKNTSTTRRRPSKAELERKEAIQRMLISLGIAILLIFAAFKLGAAGITLYNLIRLLVGSLAYLAIFGLLIYLFFFKWIRKQEGLLSGF
FTIFAGLLLIFEAYLVWKYGLDKSVLKGTMAQVVTDLTGFRTTSFAGGGLIGVALYIPTAFLFSNIGTYFIGSILILVGSLLVSPWSVY
DIAEFFSRGFAKWWEGHERRKEERFVKQEEKARQKAEKEARLEQEETEKALLDLPPVDMETGEILTEEAVQNLPPIPEEKWVEPEII
LPQAELKFPEQEDDSDDEDVQVDFSAKEALEYKLPSLQLFAPDKPKDQSKEKKIVRENIKILEATFASFGIKVTVERAEIGPSVTKYE
VKPAVGVRVNRISNLSDDLALALAAKDVRIEAPIPGKSLIGIEVPNSDIATVSFRELWEQSQTKAENFLEIPLGKAVNGTARAFDLSK
MPHLLVAGSTGSGKSVAVNGIIASILMKARPDQVKFMMVDPKMVELSVYNDIPHLLIPVVTNPRKASKALQKVVDEMENRYELFA
KVGVRNIAGFNAKVEEFNSQSEYKQIPLPFIVVIVDELADLMMVASKEVEDAIIRLGQKARAAGIHMILATQRPSVDVISGLIKANV
PSRVAFAVSSGTDSRTILDENGAEKLLGRGDMLFKPIDENHPVRLQGSFISDDDVERIVNFIKTQADADYDESFDPGEVSENEGEFS
DGDAGGDPLFEEAKSLVIETQKASASMIQRRLSVGFNRATRLMEELEIAGVIGPAEGTKPRKVLQQZ

(SEQ. ID. NO. 97)
MSYFKKYKFDKSQFKLGMRTFKTGIAVFLVLLIFGFFGWKGLQIGALTAVFSLRESFDESVHFGTSRILGNSIGGLYALVFFLLNTFF
HEAFWVTLVVVPICTMLTIMTNVAMNNKAGVIGGVAAMLIITLSIPSGETILYVFVRVLETFMGVFVAIIVNYDIDRIRLFLEKKEKZ

(SEQ. ID. NO. 98)
MNKSEHRHQLIRALITKNKIHTQAELQALLAENDIQVTQATLSRDIKNMNLSKVREEDSAYYVLNNGSISKWEKRLELYMEDALV
WMRPVQHQVLLKTLPGLAQSFGSIIDTLSFPDAIATLCGNDVCLIICEDADTAQKCFEELKKFAPPFFFEEZ

(SEQ. ID. NO. 99)
MKSIKLNALSYMGIRVLNIIFPILTGTYVARVLDRTDYGYFNSVDTILSFFLPFATYGVYNYGLRAISNVKDNKKDLNRTFSSLFYLC
IACTILTTAVYILAYPLFFTDNPIVKKVYLVMGIQLIAQIFSIEWVNEALENYSFLFYKTAFIRILMLVSIFLFVKNEHDIVVYTLVMSL
STLINYLISYFWIKRDIKLVKIHLSDFKPLFLPLTAMLVFANANMLFTFLDRLFLVKTGIDVNVSYYTIAQRIVTVIAGVVTGAIGVSV
PRLSYYLGKGDKEAYVSLVNRGSRIFNFFIIPLSFGLMVLGPNAILLYGSEKYIGGGILTSLFAFRTIILALDTILGSQILFTNGYEKRIT
VYTVFAGLLNLGLNSLLFFNHIVAPEYYLLTTMLSETSLLVFYIIFIHRKQLIHLGHIFSYTVRYSLFSLSFVAIYFLINFVYPVDMVIN
LPFLINTGLIVLLSAISYISLLVFTKDSIFYEFLNHVLALKNKFKKSZ

(SEQ. ID. NO. 100)
MELFMKITNYEIYKLKKSGLTNQQILKVLEYGENVDQELLLGDIADISGCRNPAVFMERYFQIDDAHLSKEFQKFPSFSILDDCYPW
DLSEIYDAPVLLFYKGNLDLLKFPKVAVVGSRACSKQGAKSVEKVIQGLENELVIVSGLAKGIDTAAHMAALQNGGKTIAVIGTGL
DVFYPKANKRLQDYIGNDHLVLSEYGPGEQPLKFHFPARNRIIAGLCRGVIVAEAKMRSGSLITCERAMEEGRDVFAIPGSILDGLS
DGCHHLIQEGAKLVTSGQDVLAEFEFZ

(SEQ. ID. NO. 101)
MKQLTVEDAKQIELEILDYIDTLCKKHNINYIINYGTLIGAVRHEGFIPWDDDIDLSMPREDYQRFINIFQKEKSKYKLLSLETDKNY
FNNFIKITDSTTKIIDTRNTKTYESGIFIDIFPIDRFDDPKVIDTCYKLESFKLLSFSKHKNIVYKDSLLKDWIRTAFWLLLRPVSPRYFA
NKIEKEIQKYSRENGQYMAFIPSKFKEKEVFPSGTFDKTIDLPFENLSLPAPEKFDTILTQFYGDYMTLPPEEKRFYSHEFHAYKLED
Z

(SEQ. ID. NO. 102)
MIKINHLTITQNKDLRDLVSDLTMTIQDGEKVAIIGEEGNGKSTLLKILMGEALSDFTIKGNIQSDYQSLAYIPQKVPEDLKKKTLHD
YFFLDSIDLDYSILYRLAEELHFDSNRFASDQEIGNLSGGEALKIQLIHELAKPFEILFLDEPSNDLDLETVDWLKGQIQKTRQTVIFIS
HDEDFLSETADTIVHLRLVKHRKEAETLVEHLDYDSYSEQRKANFAKQSQQAANNQRAYDKTMEKHRRVKQNVETALRATKDS
TAGRLLAKKMKTVLSQEKRYEKAAQSMTQKPLEEEQIQLFFSDIQPLPASKVLVQLEKENLSIDDRVLVQKLQLTVRGQEKIGIIGP
NGVGKSTLLAKLQRLLNDKREISLGFMPQDYHKKLQLDLSPIAYLSKTGEKEELQKIQSHLASLNFSYPEMQHQIRSLSGGQQGKL
LLLDLVLRKPNFLLLDEPTRNFSPTSQPQIRKLFATYPGGLITVSHDRRFLKEVCSIIYRMTEHGLKLVNLEDLZ

(SEQ. ID. NO. 103)
MKPKTFYNLLAEQNLPLSDQQKEQFERYFELLVEWNEKINLTAITDKEEVYLKHFYDSIAPILQGLIPNETIKLLDIGAGAGFPSLPM
KILYPELDVTIIDSLNKRINFLQLLAQELDLNGVHFYHGRAEDFAQDKNFRAQYDFVTARAVARMQVLSELTIPYLKVGGKLLALK
ASNAPEELLEAKNALNLLFSKVEDNLSYALPNRDPRYITVVEKKKETPNKYPRKAGMPNKRPLZ

(SEQ. ID. NO. 104)
MSIKLIAVDIDGTLVNSQKEITPEVFSAIQDAKEAGVKVVIATGRPIAGVAKLLDDLQLRDEGDYVVTFNGALVQETATGHEIISESL
TYEDYLDMEFLSRKLGVHMHAITKDGIYTANRNIGKYTVHESTLVSMPIFYRTPEEMAGKEIVKCMFIDEPEILDAAIEKIPAEFYER

YSINKSAPFYLELLKKNVDKGSAITHLAEKLGLTKDETMAIGDEENDRAMLEVVGNPVVMENGNPEIKKIAKYITKTNDESGVAH
AIRTWVLZ

(SEQ. ID. NO. 105)
MTWIILGVIALIVIFVIVSYNGLVKNRMQTKEAWSQIDVQLKRRNDLLPNLIETVKGYAKYEGSTLEKVAELRNQVAAATSPAEAM
KASDALTRQVSGIFAVAESYPDLKASANFVKLQEELTNTENKISYSRQLYNSVVSNYNVKLETFPSNIIAGMFGFKAADFLQTPEEE
KSVPKVDFSGLGDZ

(SEQ. ID. NO. 106)
MLFDQIASNKRKTWILLLVFFLLLALVGYAVGYLFIRSGLGGLVIALIIGFIYALSMIFQSTEIVMSMNGAREVDEQTAPDLYHVVE
DMALVAQIPMPRVFIIDDPALNAFATGSNPQNAAVAATSGLLAIMNREELEAVMGHEVSHIRNYDIRISTIAVALASAITMLSSMAG
RMMWWGGAGRRRSDDDRDGNGLEIIMLVVSLLAIVLAPLAATLVQLAISRQREFLADASSVELTRNPQGMINALDKLDNSKPMS
RHVDDASSALYINDPKKGGGFQKLFYTHPPISERIERLKQMZ

(SEQ. ID. NO. 107)
MKLNIQEIRKQSEGLNFEQTLDLVDDLRARNQEILDVKDILAVGKVQYEDRMYFLDYQLSYTIVLASSRSMEPVELVESYPVTEVF
MEGATNQLDQEVLDDDLVLPIENGELDLAESVSDNILLNIPIKVLTAEEEAGQGFISGNDWQIMTEEEYQAQKAVKKEENSPFAGL
QGLFDGDEZ

(SEQ. ID. NO. 108)
MKRQLALVVFSGGQDSTTCLFWVMQHYETVEAVTFAYGQRHHLEIQITREIAKEQGIRHHILDMSLLGQITAQPDFATIHISYIPDK
LCVESKSLKLYLFSYRNHGDFHENCINTIGKDLVNLLDPRYLEVWGKFTPRGGISIDPYYNYGKQGTKYEGLAEQRLFQHDLYPEK
IDNRZ

(SEQ. ID. NO. 109)
MTETVEDKVSHSITGLDILKGIVAAGAVISGTVATQTKVFTNESAVLEKTVEKTDALATNDTVVLGTISTSNSASSTSLSASESASTS
ASESASTSASTSASTSASESASTSASTSISASSTVVGSQTAAATEATAKKVEEDRKKPASDYVASVTNVNLQSYAKRRKRSVDSIEQ
LLASIKNAAVFSGNTIVNGAPAINASLNIAKSETKVYTGEGVDSVYRVPIYYKLKVTNDGSKLTFTYTVTYVNPKTNDLGNISSMRP
GYSIYNSGTSTQTMLTLGSDLGKPSGVKNYITDKNGRQVLSYNTSTMTTQGSGYTWGNGAQMNGFFAKKGYGLTSSWTVPITGT
DTSFTFTPYAARTDRIGINYFNGGGKVVESSTTSQSLSQSKSLSVSASQSASASASTSASASASTSASASASTSASASASTSASVSAST
SASASASTSASASASTSASESASTSASASASTSASASASTSASASASTSASESASTSASASASTSASESASTSASASASTSASASASTSA
SGSASTSTSASASTSASASASTSASASASISASESASTSASESASTSTSASASTSASESASTSASASASTSASASASTSASASASTSASAS
TSASESASTSASASASTSASASASTSASASASTSASASASTSASVSASTSASASASTSASASASTSASESASTSASASASTSASASASTS
ASASASTSASESASTSASASASTSASESASTSASASASTSASASASTSASGSASTSTSASASTSASASASTSASASASISASESASTSASE
SASTSTSASASTSASESASTSASASASTSASASASTSASASARQVRRPQPVHLNRHQPVRQPQQVLVHQLQHQRVHRLQHQPVPRL
QRQPVRQLQQVPVLQSQHQQVLQPQHRQVPRLQQAHQHLNQRRQAPQLQQVPVRQPQRRQVRQPQQVLVHQLQHQRVHRLRR
QPVHQSQQVPVRQLPHQQVPRLQQAPVRRLQQVLAPQPQPQPVRQPQQVSQRLNRHQRVRPLQQVLAPQPQRQQVHRLQRQRV
RLNRHQRVRPLQQVLAPQPQRQQVHRLQHQRVRPLQQVLAPQPQRQQVHRLQRQRVRLSQHQRVRQPQQAHQLLNLHQPVRQP
QHRQAPQLQQVPVRQPQRRQVRRLQQVPVRQPQQVPVRQPQRRQVRRPQPVHLNRHQPVRQPQQVLVHQLQHQRVHRLQHQPV
HQSQQVPVRQFRINKCLGFSKYZ

(SEQ. ID. NO. 110)
MGVETWFYSSICWLAIGLGSVWKFPYMTAANGGGGFLLIFLISTILIGFPLLLAEFALGRSAGVSAIKTFGKLGKNNKYNFIGWIGA
FALFILLSFYSVIGGWILVYLGIEFGKLFQLGGTGDYAQLFTSIISNPAIALGAQAAFILLNIFIVSRGVQKGIERASKVMMPLLFIVFV
FIIGRSLSLPNAMEGVLYFLKPDFSKLTSTGLLYALGQSFFALSLGVTVMLTYASYLDKKTNLVQSGISIVAMNISISIMAGLAIFQAR
SPFNIQSEGGPSLLFIVLPQLFDKMPFGTIFYVLFLLLFLFATVTFSVVMLEINVDNITNQDNSKRAKWSVILGILTFVFGIPSALSYGV
MADVHIFGKTFFDAMDFLVSNLLMPFGALYLSLFTGYIFKKALAMEELHLDERAWKQGLFQVWLFLLRFFVSSFQSSSLWSSLPNL
CNQKGLEZ

(SEQ. ID. NO. 111)
MLKKWQLKDVILLAFLSIFFGGVFVGSGYVYNILSLLLTPLGLQAFANEILFGLWCMAAPIAAIFVPRVGSATIGEVLAALAEVLYG
SQFGLGALLSGFVQGLGSEFGFIVTKNRYESWLSLTANSIGITLVSFVYEYIKLGYYAFSLPFVLSLLVVRFISVYFFCTILVRAIVKL
YHQFATGGKAZ

(SEQ. ID. NO. 112)
MVKVATQTPIISLFLLILSLETSFIPSIALTLSVVAFCILFMLYYRRFKMLAWMIILAILPSFANYWAVQLHGDASQAVMLGTRAFVT
VCIGLVFVSSVSLKELLLYLAQKGLSRSWSYALIVVFNSFPLIQQEIKSLKEACLLRGQELHFWSPLIYSKVLMTVFRWRHLYLRAL
SAHGYDEHAQLKNSYRTFYIPKKTKLIYLLFFLLLQTSLFLZ

(SEQ. ID. NO. 113)
MRKHQLQVHKLTILSMMIALDVVLTPIFRIEGMAPMSSVVNILAGIMMGPVYALAMATVTAFIRMTTQGIPPLALTGATFGALLAG
LFYKYGRKFHYSALGEILGTGIIGSIVSYPVMVLFTGSAAKLSWFIYTPRFFGATLIGTAISFIAFRFLIKQEFFKKVQGYFFSERIDZ

(SEQ. ID. NO. 114)
MQEFTNPFPIGSSSLIHCITNEISCEMLANGILALGCKPVMADDSREVLDFTKQSQALFINLGHLSAEKEKAIRMAASYANQSSLPMV
VDAVGVTTSSIRKSLVKDLLDYRPTVLKGNMSEIRSLVGLKHHGVGVDASAKDQETEDLLQVLKDWCQTYPGMSFLVTGPKDLV
VSKNQVAVLGNGCTELDWITGTGDLVGALTAVFLSQGKTGFEASCLAVSYLNIAAEKIVVQGMGLEEFRYQVLNQLSLLRRDEN
WLDTIKGEVYEZ

(SEQ. ID. NO. 115)
MNHKIAILSDVHGNATALEAVIADAKNQGASEYWLLGDIFLPGPGANDLVALLKDLPITASVRGNWDDRVLEALDGQYGLEDPQ
EVQLLRMTQYLMERMDPATIVWLRSLPLLEKKEIDGLRFSISHNLPDKNYGGDLLVENDTEKFDQLLDAETDVAVYGHVHKQLL
RYGSQGQQIINPGSIGMPYFNWEALKNHRSQYAVIEVEDGELLNIQFRKVAYDYEAELELAKSKGLPFIEMYEELRRDDNYQGHNL
ELLASLIEKHGYVEDVKNFFDFLZ

(SEQ. ID. NO. 116)
MNVNQIVRIIPTLKANNRKLNETFYIETLGMKALLEESAFLSLGDQTGLEKLVLEEAPSMRTRKVEGRKKLARLIVKVENPLEIEGIL
SKTDSIHRLYKGQNGYAFEIFSPEDDLILIHAEDDIASLVEVGEKPEFQTDLASISLSKFEISMELHLPTDIESFLESSEIGASLDFIPAQG
QDLTVDNTVTWDLSMLKFLVNELDIASLRQKFESTEYFIPKSEKFFLGKDRNNVELWFEEVZ

(SEQ. ID. NO. 117)
MKWTKIIKKIEEQIEAGIYPGASFAYFKDNQWTEFYLGQSDPEHGLQTEAGLVYDLASVSKVVGVGTVCTFLWEIGQLDIDRLVID
FLPESDYPDITIRQLLTHATDLDPFIPNRDLLTAPELKEAMFHLNRRSQPAFLYSDVHFLLLGFILERIFNQDLDVILKDQVWKPWGM
TETKFGPVELAVPTVRGVEAGIVHDPKARLLGRHAGSAGLFSTIKDLQIFLEHYLADDFARDLNQNFSPLDDKERSLAWNLEGDW
LDHTGYTGTFIMWNRQKQEATIFLSNRTYEKDERAQWILDRNQVMNLIRKEEZ

(SEQ. ID. NO. 118)
MMKKTYNHILVWGVIFYSICIVCFCFTPQEQSTVGVGTPGIQHLGRLVFLLTPFNSLWKLGEVSDIGQLCWIFLQNILNVFLFFPLIFQ
LLYLFPNLRKTKKVLLFSFLVSLGIECTQLILDFFFDFNRVFEIDDLWTNTLGGYLAWLLYKRLHKNKVRNZ

(SEQ. ID. NO. 119)
MKIPLLTFARHKFVYVLLTLLFLALVYRDVLMTYFFFDIHAPDLAKFDGQAIKNDLLKSALDFRILQFNLGFYQSFIIPIIIVLLGFQYI
ELKNKVLRLSIGREVSYQGLKRKLTLQVASIPCLIYLVTVLIIAIITYFFGTFSPLGWNSLFSDGSGLQRLLDGEIKSYLFFTCVLLIGIF
INAIYFLQIVDYVGNVTRSAITYLMFLWLGSMLLYSALPYYMVPMTSLMQASYGDVSLMKLFTPYILYIVPYMVLEKYEDNVZ

(SEQ. ID. NO. 120)
MFKVLQKVGKAFMLPIAILPAAGLLLGIGGALSNPTTIATYPILDNSIFQSIFQVMSSAGEVVFSNLSLLLCVGLCIGLAKRDKGTAA
LAGVTGYLVMTATIKALVKLFMAEGSAIDTGVIGALVVGIVAVYLHNRYNNIQLPSALGFFGGSRFVPIVTSFSSILIGFVFFVIWPPF
QQLLVSTGGYISQAGPIGTFLYGFLMRLSGAVGLHHIIYPMFWYTELGGVETVAGQTVVGAQKIFFAQLADLAHSGLFTEGTRFFA
GRFSTMMFGLPAACLAMYHSVPKNRRKKYAGLFFGVALTSFITGITEPIEFMFLFVSPVLYVVHAFLDGVSFFIADVLNISIGNTFSG
GVIDFTLFGILQGNAKTNWVLQIPFGLIWSVLYYIIFRWFITQFNVLTPGRGEEVDSKEISESADSTSNTADYLKQDSLQIIRALGGSN
NIEDVDACVTRLRVAVKEVNQVDKALLKQIGAVDVLEVKGGIQAIYGAKAILYKNSINEILGVDDZ

(SEQ. ID. NO. 121)
MKFRKLACTVLAGAAVLGLAACGNSGGSKDAAKSGGDGAKTEITWWAFPVFTQEKTGDGVGTYEKSIIEAFEKANPDIKVKLETI
DFKSGPEKITTAIEAGTAPDVLFDAPGRIIQYGKNGKLAELNDLFTDEFVKDVNNENIVQASKAGDKAYMYPISSAPFYMAMNKK
MLEDAGVANLVKEGWTTDDFEKVLKALKDKGYTPGSLFSSGQGGDQGTRAFISNLYSGSVTDEKVSKYTTDDPKFVKGLEKATS
WIKDNLINNGSQFDGGADIQNFANGQTSYTILWAPAQNGIQAKLLEASKVEVVEVPFPSDEGKPALEYLVNGFAVFNNKDDKKVA
ASKKFIQFIADDKEWGPKDVVRTGAFPVRTSFGKLYEDKRMETISGWTQYYSPYYNTIDGFAEMRTLWFPMLQSVSNGDEKPADA
LKAFTEKANETIKKAMKQZ

(SEQ. ID. NO. 122)
MQSTEKKPLTAFTVISTIILLLLTVLFIFPFYWILTGAFKSQPDTIVIPPQWFPKMPTMENFQQLMVQNPALQWMWNSVFISLVTMFL
VCATSSLAGYVLAKKRFYGQRILFAIFIAAMALPKQVVLVPLVRIVNFMGIHDTLWAVILPLIGWPFGVFLMKQFSENIPTELLESA
KIDGCGEIRTFWSVAFPIVKPGFAALAIFTFINTWNDYFMQLVMLTSRNNLTISLGVATMQAEMATNYGLIMAGAALAAVPIVTVF
LVFQKSFTQGITMGAVKGZ

(SEQ. ID. NO. 123)
MKIMFKNFNNILLNRKIVLLLRIVLMMILINHLLSTAVQKQDAVIFFKRELISIFSYNDYSEANLEIPKLLLNLSLFMVGWLSVILLES
DLADHYHHLIRYQSSSFFDYTRKRLVVISKFFTQDLFVWFLGLLPLGIHFKTVALFFLLAQLMMLYLLLSYLIALISAGAGFSFFLYF
LAFVGQEWMMDHIVTVYLVLLSLLVMLIVSRLEEKFKKGZ

(SEQ. ID. NO. 124)
MGKGEMGKGVIGLEFDSEVLVNKAPTLQLANGKTATFLTQYDSKTLLFAVDKEDIGQEIIGIAKGSIESMHNLPVNLAGARVPGGV
NGSKAAVHEVPEFTGGVNGTEPAVHEIAEYKGSDSLVTLTTKKDYTYKAPLAQQALPETGNKESDLLASLGLTAFFLGLFTLGKK
REQZ

(SEQ. ID. NO. 125)
MKKTFFLLVLGLFCLLPLSVFAIDFKINSYQGDLYIHADNTAEFRQKIVYQFEEDFKGQIVGLGRAGKMPSGFDIDPHPKIQAAKNG
AELADVTSEVTEEADGYTVRVYNPGQEGDIVEVDLVWNLKNLLFLYDDIAELNWQPLTDSSESIEKFEFHVRGDKGAEKLFFHTG
KLFREGTIEKSNLDYTIRLDNLPAKRGVELHAYWPRTDFASARDQGLKGNRLEEFNKIEDSIVREKDQSKQLVTWVLPSILSISLLLS
VCFYFIYRRKTTPSVKYAKNHRLYEPPMELEPMVLSEAVYSTSLEEVSPLVKGAGKFTFDQLIQATLLDVIDRGNVSIISEGDAVGL
RLVKEDGLSSFEKDCLNLAFSGKKEETLSNLFADYKVSDSLYRRAKVSDEKRIQARGLQLKSSFEEVLNQMQEGVRKRVSFWGLP
DYYRPLTGGEKALQVGMGALTILPLFIGFGLFLYSLDVHGYLYLPLPILGFLGLVLSVFYYWKLRLDNRDGVLNEAGAEVYYLWT
SFENMLREIARLDQAELESIVVWNRLLVYATLFGYADKVSHLMKVHQIQVENPDINLYVAYGWHSTFYHSTAQMSHYASVANTA
STYSVSSGSGSSGGGFSGGGGGGSIGAFZ

(SEQ. ID. NO. 126)
MKKVRKIFQKAVAGLCCISQLTAFSSIVALAETPETSPAIGKVVIKETGEGGALLGDAVFELKNNTDGTTVSQRTEAQTGEAIFSNIK
PGTYTLTEAQPPVGYKPSTKQWTVEVEKNGRTTVQGEQVENREEALSDQYPQTGTYPDVQTPYQIIKVDGSEKNGQHKALNPNPY
ERVIPEGTLSKRIYQVNNLDDNQYGIELTVSGKTVYEQKDKSVPLDVVILLDNSNSMSNIRNKNARRAERAGEATRSLIDKITSDSE
NRVALVTYASTIFDGTEFTVEKGVADKNGKRLNDSLFWNYDQTSFTTNTKDYSYLKLTNDKNDIVELKNKVPTEAEDHDGNRLM
YQFGATFTQKALMKADEILTQQARQNSQKVIFHITDGVPTMSYPINFNHATFAPSYQNQLNAFFSKSPNKDGILLSDFITQATSGEH
TIVRGDGQSYQMFTDKTVYEKGAPAAFPVKPEKYSEMKAAGYAVIGDPINGGYIWLNWRESILAYPFNSNTAKITNHGDPTRWYY
NGNIAPDGYDVFTVGIGINGDPGTDEATATSFMQSISSKPENYTNVTDTTKILEQLNRYFHTIVTEKKSIENGTITDPMGELIDLQLGT
DGRFDPADYTLTANDGSRLENGQAVGGPQNDGGLLKNAKVLYDTTEKRIRVTGLYLGTDEKVTLTYNVRLNDEFVSNKFYDTNG
RTTLHPKEVEQNTVRDFPIPKIRDVRKYPEITISKEKKLGDIEFIKVNKNDKKPLRGAVFSLQKQHPDYPDIYGAIDQNGTYQNVRT
GEDGKLTFKNLSDGKYRLFENSEPAGYKPVQNKPIVAFQIVNGEVRDVTSIVPQDIPAGYEFTNDKHYITNEPIPPKREYPRTGGIG
MLPFYLIGCMMMGGVLLYTRKHPZ

(SEQ. ID. NO. 127)
MKSINKFLTMLAALLLTASSLFSAATVFAAGTTTTSVTVHKLLATDGDMDKIANELETGNYAGNKVGVLPANAKEIAGVMFVWT
NTNNEIIDENGQTLGVNIDPQTFKLSGAMPATAMKKLTEAEGAKFNTANLPAAKYKIYEIHSLSTYVGEDGATLTGSKAVPIEIELP
LNDVVDAHVYPKNTEAKPKIDKDFKGKANPDTPRVDKDTPVNHQVGDVVEYEIVTKIPALANYATANWSDRMTEGLAFNKGTV
KVTVDDVALEAGDYALTEVATGFDLKLTDAGLAKVNDQNAEKTVKITYSATLNDKAIVEVPESNDVTFNYGNNPDHGNTPKPNK
PNENGDLTLTKTWVDATGAPIPAGAEATFDLVNAQTGKVVQTVTLTTDKNTVTVNGLDKNTEYKFVERSIKGYSADYQEITTAGE
IAVKNWKDENPKPLDPTEPKVVTYGKKFVKVNDKDNRLAGAEFVIANADNAGQYLARKADKVSQEEKQLVVTTKDALDRAVA
AYNALTAQQQTQQEKEKVDKAQAAYNAAVIAANNAFEWVADKDNENVVKLVSDAQGRFEITGLLAGTYYLEETKQPAGYALL
TSRQKFEVTATSYSATGQGIEYTAGSGKDDATKVVNKKITIPQTGGIGTIIFAVAGAAIMGIAVYAYVKNNKDEDQLAZ

(SEQ. ID. NO. 128)
MTMQKMQKMISRIFFVMALCFSLVWGAHAVQAQEDHTLVLQLENYQEVVSQLPSRDGHRLQVWKLDDSYSYDDRVQIVRDLHS
WDENKLSSFKKTSFEMTFLENQIEVSHIPNGLYYVRSIIQTDAVSYPAEFLFEMTDQTVEPLVIVAKKTDTMTTKVKLIKVDQDHNR
LEGVGFKLVSVARDVSEKEVPLIGEYRYSSSGQVGRTLYTDKNGEIFVTNLPLGNYRFKEVEPLAGYAVTTLDTDVQLVDHQLVTI
TVVNQKLPRGNVDFMKVDGRTNTSLQGAMFKVMKEESGHYTPVLQNGKEVVVTSGKDGRFRVEGLEYGTYYLWELQAPTGYV
QLTSPVSFTIGKDTRKELVTVVKNNKRPRIDVPDTGEETLVYLDACCHFVVWZ

(SEQ. ID. NO. 129)
MSHIYLSIFTSLLLMLGLVNVAQADEYLRIGMEAAYAPFNWTQDDDSNGAVKIDGTNQYANGYDVQIAKKIAKDLGKEPLVVKT
KWEGLVPALTSGKIDMIIAGMSPTAERKQEIAFSSSYYTSEPVLLVKKDSAYASAKSLDDFNGAKITSQQGVYLYNLIAQIPGAKKE
TAMGDFAQMRQALEAGVIDAYVSERPEALTAEAANSKFKMIQVEPGFKTGEEDTAIAIGLRKNDNRISQINASIETISKDDQVALM
DRMIKEQPAEATTTEETSSSFFSQVAKILSENWQQLLRGAGITLLISIVGTIIGLIIGLAIGVFRTAPLSENKVIYGLQKLVGWVLNVYI
EIFRGTPMIVQSMVIYYGTAQAFGINLDRTLAAIFIVSINTGAYMTEIVRGGILAVDKGQFEAATALGMTHNQTMRKIVLPQVVRNI
LPATGNEFVINIKDTSVLNVISVVELYFSGNTVATQTYQYFQTFTIIAVIYFVLTFTVTRILRFIERRMDMDTYTTGANQMQTEDLKZ

(SEQ. ID. NO. 130)
MTQAILEIKHLKKSYGQNEVLKDISLTVHKGEVISIIGSSGSGKSTFLRSINLLETPTDGQILYHGQNVLEKGYDLTQYREKLGMVFQ
SFNLFENLNVLENTIVAQTTVLKRERTEAEKIAKENLEKVGMGERYWQAKPKQLSGGQKQRVAIARALSMNPDAILFDEPTSALD
PEMVGEVLKIMQDLAQEGLTMIVVTHEMEFARDVSHRVIFMDKGVIAEEGKPEDLFTNPKEDRTKEFLQRYLKZ

(SEQ. ID. NO. 131)
MKKYQLLFKISAVFSYLFFVFSLSQLTLIVQNYWQFSSQIGNLFWIQNILSLLFIGVMIVVLVKTGHGYLFRIPRKKWLWYSILTVLV
LVFQISFNVQTAKHVQSTAEGWAVLIGYSGTNFAELGIYIALFFLVPLMEELIYRGLLQHAFFKHSRFGLDLLLPSILFALPHFSSLPS
LLDIFVFATVGIIFAGLTRYTKSIYPSYAVHVINNIVATFPFLLTFLHRVLGZ

(SEQ. ID. NO. 132)
MNKKQWLGLGLVAVAAVGLAACGNRSSRNAASSSDVKTKAAIVTDTGGVDDKSFNQSAWEGLQAWGKEHNLSKDNGFTYFQS
TSEADYANNLQQAAGSYNLIFGVGFALNNAVKDAAKEHTDLNYVLIDDVIKDQKNVASVTFADNESGYLAGVAAAKTTKTKQV
GFVGGIESEVISRFEAGFKAGVASVDPSIKVQVDYAGSFGDAAKGKTIAAAQYAAGADIVYQVAGGTGAGVFAEAKSLNESRPEN
EKVWVIGVDRDQEAEGKYTSKDGKESNFVLVSTLKQVGTTVKDISNKAERGEFPGGQVIVYSLKDKGVDLAVTNLSEEGKKAVE
DAKAKILDGSVKVPEKZ

(SEQ. ID. NO. 133)
MSKKLQQISVPLISVFLGILLGAIVMWIFGYDAIWGYEELFYTAFGSLRGIGEIFRAMGPLVLIGLGFAVASRAGFFNVGLPGQALAG
WILSGWFALSHPDMPRPLMILATIVIALIAGGIVGAIPGILRAYLGTSEVIVTIMMNYIVLYVGNAFIHAFPKDFMQSTDSTIRVGAN
ATYQTPWLAELTGNSRMNIGIFFAIIAVAVIWFMLKKTTLGFEIRAVGLNPHASEYAGISAKRTIILSMIISGALAGLGGAVEGLGTF
QNVYVQGSSLAIGFNGMAVSLLAANSPIGILFAAFLFGVLQVGAPGMNAAQVPSELVSIVTASIIFFVSVHYLIERFVKPKKQVKGG
KZ

(SEQ. ID. NO. 134)
MGVKKKLKLTSLLGLSLLIMTACATNGVTSDITAESADFWSKLVYFFAEIIRFLSFDISIGVGIILFTVLIRTVLLPVFQVQMVASRKM
QEAQPRIKALREQYPGRDMESRTKLEQEMRKVFKEMGVRQSDSLWPILIQMPVILALFQALSRVDFLKTGHFLWINLGSVDTTLVL
PILAAVFTFLSTWLSNKALSERNGATTAMMYGIPVLIFIFAVYAPGGVALYWTVSNAYQVLQTYFLNNPFKIIAEREAVVQAQKDL
ENRKRKAKKKAQKTKZ

(SEQ. ID. NO. 135)
MVIDPFAINELDYYLVSHFHSDHIDPYTAAAILNNPKLEHVKFIGPYHCGRIWEGWGVPKERIIVVKPGDTIELKDMKIHAVESFDR
TCLVTLPVNGADETGGELAGLAVTDEEMAQKAVNYIFETPGGTIYHGADSHFSNYFAKHGKDFKIDVALNNYGENPVGIQDKMT
SIDLLRMAENLRTKVIIPVHYDIWSNFMASTNEILELWKMRKDRLQYDFHPFIWEVGGKYTYPQDQHLVEYHHPRGFDDCFEQDS
NIQFKALLZ

(SEQ. ID. NO. 136)
MFLSGWLSSFANTYIHDLLGVLFPDSPFLNAFESAIAAPLVEEPLKLLSLVFVLALIPVRKLKSLFLLGIASGLGFQMIKDIGYIRTDLP
EGFDFTISRILERIISGIASHWTFSGLAVVGVYLLYRAYKGQKVGKKQGLIFLGLALGTHFLFNSPFVELETELPLAIPVVTAIALYGF
YHAYCFVEKHNELMTZ

(SEQ. ID. NO. 137)
MKVEPRCDVLSRMSHFFIRILIMELQELVERSWAIRQAYHELEVKHHDSKWTVEEDLLALSNDIGNFQRLVMTKQGRYYDETPYT
LEQKLSENIWWLLELSQRLDIDILTEMENFLSDKEKQLNVRTWKZ

(SEQ. ID. NO. 138)
MLDWKQFFLAYLRSRSRLFIYLLSLAFLVLLFQFLFASLGIYFLYFFFLCCFVTILFFTWDILVETQVYRQELLYGEREAKSPLEIALA
EKLEAREMELYQQRSKAERKLTDLLDYYTLWVHQIKTPIAASQLLVAEVVDRQLKQQLEQEIFKIDSYTNLVLQYLRLESFHDDLV

LKQVQIEDLVKEIIRKYALFFIQKGLNVNLHDLDKEIVTDKKWLLVVIEQIISNSLKYTKEGGLEIYMDDQELCIKDTGIGIKNSDVL
RVFERGFSGYNGRLTQQSSGLGLYLSKKISEELGHQIRIESEVGKGTTVRIQFAQVNLVLEZ

(SEQ. ID. NO. 139)
MELNTHNAEILLSAANKSHYPQDELPEIALAGRSNVGKSSFINTMLNRKNLARTSGKPGKTQLLNFFNIDDKMRFVDVPGYGYAR
VSKKEREKWGCMIEEYLTTRENLRAVVSLVDLRHDPSADDVQMYEFLKYYEIPVIIVATKADKIPRGKWNKHESAIKKKLNFDPS
DDFILFSSVSKAGMDEAWDAILEKLZ

(SEQ. ID. NO. 140)
MTKKQLHLVIVTGMSGAGKTVAIQSFEDLGYFTIDNMPPALLPKFLQLVEIKEDNPKLALVVDMRSRSFFSEIQAVLDELENQDGL
DFKILFLDAADKELVARYKETRRSHPLAADGRILDGIKLERELLAPLKNMSQNVVDTTELTPRELRKTLAEQFSDQEQAQSFRIEV
MSFGFKYGIPIDADLVFDVRFLPNPYYLPELRNQTGVDEPVYDYVMNHPESEDFYQHLLALIEPILPSYQKEGKSVLTIAMGCTGGQ
HRSVAFAKRLAQDLSKNWSVNEGHRDKDRRKETVNRSZ

(SEQ. ID. NO. 141)
MRKPKITVIGGGTGSPVILKSLREKDVEIAAIVTVADDGGSSGELRKNMQQLTPPGDLRNVLVAMSDMPKFYEKVFQYRFSEDAG
AFAGHPLGNLIIAGLSEMQGSTYNAMQLLSKFFHTTGKIYPSSDHPLTLHAVFQDGTEVAGESHIVDHRGIIDNVYVTNALNDDTPL
ASRRVVQTILESDMIVLGPGSLFTSILPNIVIKEIGRALLETKAEIAYVCNIMTQRGETEHFTDSDHVEVLHRHLGRPFIDTVLVNIEK
VPQEYMNSNRFDEYLVQVEHDFVGLCKQVSRVISSNFLRLENGGAFHDGDLIVDELMRI
IQVKKZ

(SEQ. ID. NO. 142)
MKNLIKLLIIRLIVNLADSVFYIVALWHVSNNYSSSMFLGIFIAVNYLPDLLLIFFGPVIDRVNPQKILIISILVQLAVAVIFLLLLNQISF
WVIMSLVFISVMASSISYVIEDVLIPQVVEYDKIVFANSLFSISYKVLDSIFNSFASFLQVAVGFILLVKIDIGIFLLALFILLLLKFRTSN
ANIENFSFKYYKREVLQGTKFILNNKLLFKTSISLTLINFFYSFQTVVVPIFSIRYFDGPIFYGIFLTIAGLGGILGNMLAPIVIKYLKSN
QIVGVFLFLNGSSWLVAIVIKDYTLSLILFFVCFMSKGVFNIIFNSLYQQIPPHQLLGRVNTTIDSIISFGMPIGSLVAGTLIDLNIELVLI
AISIPYFLFSYIFYTDNGLKEFSIYZ

(SEQ. ID. NO. 143)
MMSNKNKEILIFAILYTVLFMFDGVKLLASLMPSAIANYLVYVVLALYGSFLFKDRLIQQWKEIRKTKRKFFFGVLTGWLFLILMT
VVFEFVSEMLKQFVGLDGQGLNQSNIQSTFQEQPLLIAVFACVIGPLVEELFFRQVLLHYLQERLSGLLSIILVGLVFALTHMHSLAL
SEWIGAVGYLGGGLAFSIIYVKEKENIYYPLLVHMLSNSLSLIILAISIVKZ

(SEQ. ID. NO. 144)
LKKPIIEFKNVSKVFEDSNTKVLKDINFELEEGKFYTLLGASGSGKSTILNIIAGLLDATTGDIMLDGVRINDIPTNKRDVHTVFQSYA
LFPHMNVFENVAFPLRLRKIDKKEIEQRVAEVLKMVQLEGYEKRSIRKLSGGQRQRVAIARAIINQPRVVLLDEPLSALDLKLRTD
MQYELRELQQRLGITFVFVTHDQEEALAMSDWIFVMNDGEIVQSGTPVDIYDEPINHFVATFIGESNILPGTMIEDYLVEFNGKRFE
AVDGGMKPNEPVEVVIRPEDLRITLPEEGKLQVKVDTQLFRGVHYEIIAYDELGNEWMIHSTRKAIVGEEIGLDFEPEDIHIMRLNE
TEEEFDARIEEYVEIEEQEAGLINAIEEERDEENKLZ

(SEQ. ID. NO. 145)
MKSMRILFLLALIQISLSSCFLWKECILSFKQSTAFFIGSMVFVSGICAGVNYLYTRKQEVHSVLASKKSVKLFYSMLLLINLLGAVL
VLSDNLFIKNTLQQELVDFLLPSFFFLFGLDLLIFLPLKKYVRDFLAMLDRKKTVLVTILATLLFLRNPMTIVSLLIYIGLGLFFAAYL
VPNSVKKEVSFYGHIFRDLVLVIVTLIFFZ

(SEQ. ID. NO. 146)
MVKKIIGMVLALLSVTVVGVGVFAYTIYQQGTETLAKTYKKIGEETKVIEATEPLTILLMGVDTGNVERTETWVGRSDSMILMTV
NPKTKKTTMMSLERDILTRIESGNGQAHEAKLNSAYADGGAELAIETIQKMMNIHIDRYVMVNMRGLQKLVDAVGGITVNNILGF
PISISDQEEFNTISIGVGEQHIGGEEALVYARMRYQDPEGDYGRQKRQREVIQKVMEKALSLNSIGHYQEILKALSDNMQTNIDLSA
KSIPNLLGYKDSFKTIETQQLQGEGEILQGVSYQIVSRAHMLEMQNLLRRSLGQEEVTQLETNAVLFEDLFGRAPVGDEDNZ

(SEQ. ID. NO. 147)
MKKQAYVIIALTSFLFVFFFSHSLLEILDFDWSIFLHDVEKTEKFVFLLLVFSMSMTCLLALFWRGIEELSLRKMQANLKRLLAGQE
VVQVADPDLDASFKSLSGKLNLLTEALQKAENQSLAQEEEIIEKERKRIARDLHDTVSQELFAAHMILSGISQQALKLDREKMQTQ
LQSVTAILETAQKDLRVLLLHLRPVELEQKSLIEGIQILLKELEDKSDLRVSLKQNMTKLPKKIEEHIFRILQELISNTLRHAQASCLD
VYLYQTDVELQLKVVDNGIGFQLGSLDDLSYGLRNIKERVEDMAGTVQLLTAPKQGLAVDIRIPLLDKEZ

(SEQ. ID. NO. 148)
MIVSIISQGFVWAILGLGIFMTFRILNFPDMTTEGSFPLGGAVAVTLITKGVNPFLATLVAVGAGCLAGMAAGLLYTKGKIPTLLSGI
LVMTSCHSIMLLIMGRANLGLLGTKQIQDVLPFDSDLNQLLTGLIFVSIVIALMLFFLDTKLGQAYIATGDNPDMARSFGIHTGRME
LMGLVLSNGVIALAGALIAQQEGYADVSRGIGVIVVGLASLIIGEVIFKSLSLAERLVTIVVGSIAYQFLVWAVIALGFNTSYLRLYS
ALILAVCLMIPTFKQTILKGAKLSKZ

(SEQ. ID. NO. 149)
MKKMKVWSTVLATGVALTTLAACSGGSNSTTASSSEEKADKSQELVIYSNSVSNGRGDWLTAKAKEAGFNIKMVDIAGAQLADR
VIAEKNNAVADMVFGIGAVDSNKIRDQKLLVQYKPKWLDKIDQSLSDKDNYYNPVIVQPLVLIGAPDVKEMPKDWTELGSKYKG
KYSISGLQGGTGRAILASILVRYLDDKGELGVSEKGWEVAKEYLKNAYTLQKGESSIVKMLDKEDPIQYGMMWGSGALVGQKEQ
NVVFKVMTPEIGVPFVTEQTMVLSTSKKQALAKEFIDWFGQSEIQVEYSKNFGSIPANKDALKDLPEDTKKFVDQVKPQNIDWEA
VGKHLDEWVEKAELEYVQZ

(SEQ. ID. NO. 150)
MIKFDNIQIKYGDFVAIDNLNLDIHEGEFFTFLGPSGCGKSTTLRALVGFLDPSSGSIEVNGTDVTHLEPEKRGIGIVFQSYALFPTMT
VFDNIAFGLKVKKVAPDVIKAKVSAVAAKIKISDQQLQRNVSELSGGQQQRVALARALVLEPKILCLDEPLSNLDAKLRVDLRKEL
KRLQKELGITTLYVTHDQEEALTLSDRIAVFNNGYIEQVGTPVEIYHNSQTEFVCDFIGDINVLTDETVHEVLLKNTSVFLEDKKGYI
RLEKVRFNRETEQDFILKGTIIDVEFSGVTIHYTIKVSESQILNVTSIDSQAAIRSVGESVELFITPSDVLQFZ

(SEQ. ID. NO. 151)
MRHKLNLKDWLIRLGLIWFLVTFIIYPNFDLVVNVFVKGGEFSLDAVHRVLKSQRALQSIMNSFKLAFSLIITVNVVGILCVLFTEYF
DIKGAKILKLGYMTSLIYGGVVLATGYKFVYGPYGLITKFLQNVIPSLDPNWFIGYGAVLFIMTFSGTANHTLFLTNTIRSVDYHTIE
AARNMGAKPFTVFRKVVLPTLIPTLFALTIMVFLSGLSAVAAPMIVGGKEFQTINPMIITFAGMGNSRDLAALLAIILGIATTILLTIM
NKIEKGGNYISISKTKAPLKKQKIASKPWNIIAHIVAYGLFTVFMLPLIFIVLYSFTDPVAIQTGNLTLSNFTLENYRLFFSNSAAFSPF
LVSFIYSIIAATTATILAVVFARVVRKHKSRFDFLFEYGALLPWLLPSTLLAVSLLFTFNQPQFLVLNQILVGSLVILLIAYIVVKIPFSY
RMVRAILFSVDDEMEDAARSMGASPFYTMMKVIIPFILPVVLSVIALNFNSLLTDFDLSVFLYHPLAQPLGITIRSAGDETATSNAQA
LVFVYTIVLMIISGTVLYFTQRPGRKVRKZ

Table 3

ID201 - 4106.4 (SEQ. ID. NO. 168)

ATGATAAAAAATCCTAAATTATTAACCAAGTCTTTTTTAAGAAGTTTTGCAATTCTAGGTGGTGTTGGTCTAGTCATTCATAT
AGCTATTTATTTGACCTTTCCTTTTTATTATATTCAACTGGAGGGGGAAAAGTTTAATGAGAGCGCAAGAGTGTTTACGGAGT
ATTTAAAGACTAAGACATCTGATGAAATTCCAAGCTTACTCCAGTCTTATTCAAAGTCCTTGACCATATCTGCTCACCTTAAA
AGAGATATTGTAGATAAGCGGCTCCCTCTTGTGCATGACTTGGATATTAAAGATGGAAAGCTATCAAATTATATCGTGATGTT
AGATATGTCTGTTAGTACAGCAGATGGTAAACAGGTAACCGTGCAATTTGTTCACGGGGTGGATGTCTACAAAGAAGCAAAGA
ATATTTTGCTTTTGTATCTCCCATATACATTTTTGGTTACAATTGCTTTTTCCTTTGTTTTTTCTTATTTTTATACTAAACGC
TTGCTCAATCCTCTTTTTTACATTTCAGAAGTGACTAGTAAAATGCAAGATTTGGATGACAATATTCGTTTTGATGAAAGTAG
GAAAGATGAAGTTGGTGAAGTTGGAAAACAGATTAATGGTATGTATGAGCACTTGTTGAAGGTTATTTATGAGTTGGAAAGTC
GTAATGAGCAAATTGTAAAATTGCAAAATCAAAAGGTTTCCTTTGTCCGCGGAGCATCACATGAGTTGAAAACCCCTTTAGCC
AGTCTTAGAATTATCCTAGAGAATATGCAGCATAATATTGGAGATTACAAAGATCATCCAAAATATATTGCAAAGAGTATAAA
TAAGATTGACCAGATGAGCCACTTATTAGAAGAAGTACTGGAGTCTTCTAAATTCCAAGAGTGGACAGAGTGTCGTGAGACCT
TGACTGTTAAGCCAGTTTTAGTAGATATTTTATCACGTTATCAAGAATTAGCTCATTCAATAGGTGTTACAATTGAAAATCAA
TTGACAGATGCTACCAGGGTCGTCATGAGTCTTAGGGCATTGGATAAGGTTTTGACAAACCTGATTAGTAATGCAATTAAATA
TTCAGATAAAAATGGGCGTGTAATCATATCCGAGCAAGATGGCTATCTCTCTATCAAAAATACATGTGCGCCTCTAAGTGACC
AAGAACTAGAACATTTATTTGATATATTCTATCATTCTCAAATCGTGACAGATAAGGATGAAAGTTCCGGTTTGGGTCTTTAC
ATTGTGAATAATATTTTAGAAAGCTATCAAATGGATTATAGTTTTCTCCCTTATGAACACGGTATGGAATTTAAGATTAGCTT
GTAG

(SEQ. ID. NO. 152)
MIKNPKLLTKSFLRSFAILGGVGLVIHIAIYLTFPFYYIQLEGEKFNESARVFTEYLKTKTSDEIPSLLQSYSKSLTISAHLK
RDIVDKRLPLVHDLDIKDGKLSNYIVMLDMSVSTADGKQVTVQFVHGVDVYKEAKNILLLYLPYTFLVTIAFSFVFSYFYTKR
LLNPLFYISEVTSKMQDLDDNIRFDESRKDEVGEVGKQINGMYEHLLKVIYELESRNEQIVKLQNQKVSFVRGASHELKTPLA
SLRIILENMQHNIGDYKDHPKYIAKSINKIDQMSHLLEEVLESSKFQEWTECRETLTVKPVLVDILSRYQELAHSIGVTIENQ
LTDATRVVMSLRALDKVLTNLISNAIKYSDKNGRVIISEQDGYLSIKNTCAPLSDQELEHLFDIFYHSQIVTDKDESSGLGLY
IVNNILESYQMDYSFLPYEHGMEFKISLZ

ID202 - 4106.9 (SEQ. ID. NO. 169)

ATGGATAAAATTATTAAAACTATATCAGAAAGCGGAGCCTTTCGTGCTTTTGTCCTTGATAGCACTGAAACCGTCCGCACTGC
TCAAGAAAAACATCAAACCCAAGCTAGCTCAACTGTAGCGCTTGGTCGAACTCTTATCGCTAGCCAGATTCTCGCAGCCAATG
AAAAAGGAAATACCAAACTTACAGTTAAGGTGTTGGGATCTAGCTCTCTAGGTGCTATTATCACCGTCGCTGATACCAAGGGG
AACGTCAAAGGCTATGTTCAAAATCCTGGTGTTGACATCAAAAAGACTGCGACTGGTGAAGTCCTAGTCGGACCTTTTGTTGG
AAATGGTCAATTCCTCGTTATCACAGACTACGGTACTGGAAATCCTTACAACTCTATAACTCCCCTCATCTCTGGAGAAATCG
GTGAAGACCTTGCCTTTTACCTTACTGAAAGCCAACAAACGCCTTCAGCGGTCGGCCTCAATGTCCTTTTGGACGAGGAAGAC
AAGGTCAAGGTTGCAGGTGGTTTCCTAGTTCAAGTCTTGCCAGGAGCCAAGAAAGAAGAGATTGCTCGCTTTGAAAAACGCAT
CCAAGAAATGCCAGCTATCTCTACTCTTCTCGAAAGCGACGACCATATCGAAGCCCTCCTCAAGGCTATCTACGGGGACGAAG
CCTACAAGCGTCTTTCTGAAGAAGAAATCCGTTTCCAATGTGACTGTAGCCATGAACGCTTTATGAACGCTCTTGCCAGCCTT
CCAAGCTCAGACTTACAGGAAATGAAAGAGGAAGACCACGGGGCAGAAATCACTTGTCAATTCTGCCAAACTACTTACAACTT
TGATGAAAAGGACCTGGAGGAACTCATTCGTGACAAATCTTAA

(SEQ. ID. NO. 153)
MDKIIKTISESGAFRAFVLDSTETVRTAQEKHQTQASSTVALGRTLIASQILAANEKGNTKLTVKVLGSSSLGAIITVADTKG
NVKGYVQNPGVDIKKTATGEVLVGPFVGNGQFLVITDYGTGNPYNSITPLISGEIGEDLAFYLTESQQTPSAVGLNVLLDEED
KVKVAGGFLVQVLPGAKKEEIARFEKRIQEMPAISTLLESDDHIEALLKAIYGDEAYKRLSEEEIRFQCDCSHERFMNALASL
PSSDLQEMKEEDHGAEITCQFCQTTYNFDEKDLEELIRDKSZ

ID203 - 4115 (SEQ. ID. NO. 170)

ATGAAATCAATAACTAAAAAGATTAAAGCAACTCTTGCAGGAGTAGCTGCCTTGTTTGCAGTATTTGCTCCATCATTTGTATC
TGCTCAAGAATCATCAACTTACACTGTTAAAGAAGGTGATACACTTTCAGAAATCGCTGAAACTCACAACACAACAGTTGAAA
AATTGGCAGAAAACAACCACATTGATAACATTCATTTGATTTATGTTGATCAAGAGTTGGTTATCGATGGCCCTGTAGCGCCT
GTTGCAACACCAGCGCCAGCTACTTATGCGGCACCAGCCGCTCAAGATGAAACTGTTTCAGCTCCAGTAGCAGAAACTCCAGT
AGTAAGTGAAACAGTTGTTTCAACTGTAAGCGGATCTGAAGCAGAAGCCAAAGAATGGATCGCTCAAAAAGAATCAGGTGGTA
GTATACAGCTACAAATGGACGTTATATCGGACGTTACCAATTAA

(SEQ. ID. NO. 154)
MKSITKKIKATLAGVAALFAVFAPSFVSAQESSTYTVKEGDTLSEIAETHNTTVEKLAENNHIDNIHLIYVDQELVIDGPVAP
VATPAPATYAAPAAQDETVSAPVAETPVVSETVVSTVSGSEAEAKEWIAQKESGGSIQLQMDVISDVTNZ

ID204 - 4117.1 (SEQ. ID. NO. 171)

ATGAATTTAGGAGAATTTTGGTACAATAAAATAAATAAGAACAGAGGAAGAAGGTTAATGAAGAAAGTAAGATTTATTTTTTT
AGCTCTGCTATTTTTCTTAGCTAGTCCAGAGGGTGCAATGGCTAGTGATGGTACTTGGCAAGGAAAACAGTATCTGAAAGAAG
ATGGCAGTCAAGCAGCAAATGAGTGGGTTTTTGATACTCATTATCAATCTTGGTTCTATATAAAAGCAGATGCTAACTATGCT
GAAAATGAATGGCTAAAGCAAGGTGACGACTATTTTTACCTCAAATCTGGTGGCTATATGGCCAAATCAGAATGGGTAGAAGA
CAAGGGAGCCTTTTATTATCTTGACCAAGATGGAAAGATGAAAAGAAATGCTTGGGTAGGAACTTCCTATGTTGGTGCAACAG
GTGCCAAAGTAATAGAAGACTGGGTCTATGATTCTCAATACGATGCTTGGTTTTATATCAAAGCAGATGGACAGCACGCAGAG
AAAGAATGGCTCCAAATTAAAGGGAAGGACTATTATTTCAAATCCGGTGGTTATCTACTGACAAGTCAGTGGATTAATCAAGC
TTATGTGAATGCTAGTGGTGCCAAAGTACAGCAAGGTTGGCTTTTTGACAAACAATACCAATCTTGGTTTTACATCAAAGAAA
ATGGAAACTATGCTGATAAAGAATGGATTTTCGAGAATGGTCACTATTATTATCTAAAATCCGGTGGCTACATGGCAGCCAAT
GAATGGATTTGGGATAAGGAATCTTGGTTTTATCTCAAATTTGATGGGAAAATGGCTGAAAAAGAATGGGTCTACGATTCTCA
TAGTCAAGCTTGGTACTACTTCAAATCCGGTGGTTACATGACAGCCAATGAATGGATTTGGGATAAGGAATCTTGGTTTTATC

TCAAATCTGATGGGAAAATAGCTGAAAAAGAATGGGTCTACGATTCTCATAGTCAAGCTTGGTACTACTTCAAATCCGGTGGT
TACATGACAGCCAATGAATGGATTTGGGATAAGGAATCTTGGTTTTACCTCAAATCTGATGGGAAAATAGCTGAAAAAGAATG
GGTCTACGATTCTCATAGTCAAGCTTGGTACTACTTCAAATCTGGTGGCTACATGGCGAAAAATGAGACAGTAGATGGTTATC
AGCTTGGAAGCGATGGTAAATGGCTTGGAGGAAAAACTACAAATGAAAATGCTGCTTACTATCAAGTAGTGCCTGTTACAGCC
AATGTTTATGATTCAGATGGTGAAAAGCTTTCCTATATATCGCAAGGTAGTGTCGTATGGCTAGATAAGGATAGAAAAAGTGA
TGACAAGCGCTTGGCTATTACTATTTCTGGTTTGTCAGGCTATATGAAAACAGAAGATTTACAAGCGCTAGATGCTAGTAAGG
ACTTTATCCCTTATTATGAGAGTGATGGCCACCGTTTTTATCACTATGTGGCTCAGAATGCTAGTATCCCAGTAGCTTCTCAT
CTTTCTGATATGGAAGTAGGCAAGAAATATTATTCGGCAGATGGCCTGCATTTTGATGGTTTTAAGCTTGAGAATCCCTTCCT
TTTCAAAGATTTAACAGAGGCTACAAACTACAGTGCTGAAGAATTGGATAAGGTATTTAGTTTGCTAAACATTAACAATAGCC
TTTTGGAGAACAAGGGCGCTACTTTTAAGGAAGCCGAAGAACATTACCATATCAATGCTCTTTATCTCCTTGCCCATAGTGCC
CTAGAAAGTAACTGGGGAAGAAGTAAAATTGCCAAAGATAAGAATAATTTCTTTGGCATTACAGCCTATGATACGACCCCTTA
CCTTTCTGCTAAGACATTTGATGATGTGGATAAGGGAATTTTAGGTGCAACCAAGTGGATTAAGGAAAATTATATCGATAGGG
GAAGAACTTTCCTTGGAAACAAGGCTTCTGGTATGAATGTGGAATATGCTTCAGACCCTTATTGGGGCGAAAAAATTGCTAGT
GTGATGATGAAAATCAATGAGAAGCTAGGTGGCAAAGATTAG

(SEQ. ID. NO. 155)
MNLGEFWYNKINKNRGRRLMKKVRFIFLALLFFLASPEGAMASDGTWQGKQYLKEDGSQAANEWVFDTHYQSWFYIKADANYA
ENEWLKQGDDYFYLKSGGYMAKSEWVEDKGAFYYLDQDGKMKRNAWVGTSYVGATGAKVIEDWVYDSQYDAWFYIKADGQHAE
KEWLQIKGKDYYFKSGGYLLTSQWINQAYVNASGAKVQQGWLFDKQYQSWFYIKENGNYADKEWIFENGHYYYLKSGGYMAAN
EWIWDKESWFYLKFDGKMAEKEWVYDSHSQAWYYFKSGGYMTANEWIWDKESWFYLKSDGKIAEKEWVYDSHSQAWYYFKSGG
YMTANEWIWDKESWFYLKSDGKIAEKEWVYDSHSQAWYYFKSGGYMAKNETVDGYQLGSDGKWLGGKTTNENAAYYQVVPVTA
NVYDSDGEKLSYISQGSVVWLDKDRKSDDKRLAITISGLSGYMKTEDLQALDASKDFIPYYESDGHRFYHYVAQNASIPVASH
LSDMEVGKKYYSADGLHFDGFKLENPFLFKDLTEATNYSAEELDKVFSLLNINNSLLENKGATFKEAEEHYHINALYLLAHSA
LESNWGRSKIAKDKNNFFGITAYDTTPYLSAKTFDDVDKGILGATKWIKENYIDRGRTFLGNKASGMNVEYASDPYWGEKIAS
VMMKINEKLGGKDZ

ID205 - 4118.1 (SEQ. ID. NO. 172)
ATGAAAAAATTAGGTACATTACTCGTTCTCTTTCTTTCTGCAATCATTCTTGTAGCATGTGCTAGCGGAAAAAAAGATACAAC
TTCTGGTCAAAAACTAAAAGTTGTTGCTACAAACTCAATCATCGCTGATATTACTAAAAATATTGCTGGTGACAAAATTGACC
TTCATAGTATCGTTCCGATTGGGCAAGACCCACACGAATACGAACCACTTCCTGAAGACGTTAAGAAAACTTCTGAGGCTAAT
TTGATTTTCTATAACGGTATCAACCTTGAAACAGGTGGCAATGCTTGGTTTACAAAATTGGTAGAAAATGCCAAGAAAACTGA
AAACAAAGACTACTTCGCAGTCAGCGACGGCGTTGATGTTATCTACCTTGAAGGTCAAAATGAAAAAGGAAAAGAAGACCCAC
ACGCTTGGCTTAACCTTGAAAACGGTATTATTTTTGCTAAAAATATCGCCAAACAATTGAGCGCCAAAGACCCTAACAATAAA
GAATTCTATGAAAAAAATCTCAAAGAATATACTGATAAGTTAGACAAACTTGATAAAGAAAGTAAGGATAAATTTAATAAGAT
CCCTGCTGAAAAGAAACTCATTGTAACCAGCGAAGGAGCATTCAAATACTTCTCTAAAGCCTATGGTGTCCCAAGTGCTTACA
TCTGGGAAATCAATACTGAAGAAGAAGGAACTCCTGAACAAATCAAGACCTTGGTTGAAAAACTTCGCCAAACAAAAGTTCCA
TCACTCTTTGTAGAATCAAGTGTGGATGACCGTCCAATGAAAACTGTTTCTCAAGACACAAACATCCCAATCTACGCTCAAAT
CTTTACTGACTCTATCGCAGAACAAGGTAAAGAAGGCGACAGCTACTACAGCATGATGAAATACAACCTTGACAAGATTGCTG
AAGGATTGGCAAAATAA

(SEQ. ID. NO. 156)
MKKLGTLLVLFLSAIILVACASGKKDTTSGQKLKVVATNSIIADITKNIAGDKIDLHSIVPIGQDPHEYEPLPEDVKKTSEAN
LIFYNGINLETGGNAWFTKLVENAKKTENKDYFAVSDGVDVIYLEGQNEKGKEDPHAWLNLENGIIFAKNIAKQLSAKDPNNK
EFYEKNLKEYTDKLDKLDKESKDKFNKIPAEKKLIVTSEGAFKYFSKAYGVPSAYIWEINTEEEGTPEQIKTLVEKLRQTKVP
SLFVESSVDDRPMKTVSQDTNIPIYAQIFTDSIAEQGKEGDSYYSMMKYNLDKIAEGLAKZ

ID206 - 4119.1 (SEQ. ID. NO. 173)
ATGGAATGGTATAAAAAAATCGGACTTCTTGCAACTACAGGTTTAGCTTTGTTTGGGCTCGGCGCTTGCTCCAACTATGGTAA
ATCTGCGGATGGCACAGTGACCATCGAGTATTTCAACCAGAAAAAAGAAATGACCAAAACCTTGGAAGAAATCACTCGTGATT
TTGAGAAGGAAAACCCTAAGATCAAGGTCAAAGTCGTCAATGTACCAAATGCTGGTGAAGTATTGAAGACACGCGTTCTCGCA
GGAGATGTGCCTGATGTGGTCAATATTTACCCACAGTCCATCGAACTGCAAGAATGGGCAAAAGCAGGTGTTTTTGAAGATTT
GAGCAACAAAGACTACCTGAAACGCGTGAAAAATGGCTACGCTGAAAAATATGCTGTAAACGAAAAAGTTTACAACGTTCCTT
TTACAGCTAATGCTTATGGAATTTACTACAACAAAGATAAATTCGAAGAACTGGGCTTGAAGGTTCCTGAAACCTGGGATGAA
TTTGAACAGTTAGTCAAAGATATCGTTGCTAAAGGACAAACACCATTTGGAATTGCAGGTGCAGATGCTTGGACACTCAATGG
TTACAATCAATTAGCCTTTGCGACAGCAACAGGTGGAGGAAAAGAAGCAAATCAATACCTTCGTTATTCTCAACCAAATGCCA
TTAAATTGTCGGATCCGATTATGAAAGATGATATCAAGGTCATGGACATCCTTCGCATCAATGGATCTAAGCAAAAGAACTGG
GAAGGTGCTGGCTATACCGATGTTATCGGAGCCTTCGCACGTGGGGATGTCCTCATGACACCAAATGGGTCTTGGGCGATCAC
AGCGATTAATGAACAAAAACCGAACTTTAAGATTGGGACCTTCATGATTCCAGGAAAAGAAAAAGGACAAAGCTTAACCGTTG
GTGCGGGAGACTTGGCATGGTCTATCTCAGCCACCACCAAACATCCAAAAGAAGCCAATGCCTTTGTGGAATATATGACCCGT
CCAGAAGTCATGCAAAAATACTACGATGTGGACGGATCTCCAACAGCGATCGAAGGGGTCAAACAAGCAGGAGAAGATTCACC
GCTTGCTGGTATGACCGAATATGCCTTTACGGATCGTCACTTGGTCTGGTTGCAACAATACTGGACCAGTGAAGCAGACTTCC
ATACCTTGACCATGAACTATGTCTTGACCGGTGATAAACAAGGCATGGTCAATGATTTGAATGCCTTCTTTAACCCGATGAAA
GCGGATGTGGATTAG

(SEQ. ID. NO. 157)
MEWYKKIGLLATTGLALFGLGACSNYGKSADGTVTIEYFNQKKEMTKTLEEITRDFEKENPKIKVKVVNVPNAGEVLKTRVLA
GDVPDVVNIYPQSIELQEWAKAGVFEDLSNKDYLKRVKNGYAEKYAVNEKVYNVPFTANAYGIYYNKDKFEELGLKVPETWDE
FEQLVKDIVAKGQTPFGIAGADAWTLNGYNQLAFATATGGGKEANQYLRYSQPNAIKLSDPIMKDDIKVMDILRINGSKQKNW
EGAGYTDVIGAFARGDVLMTPNGSWAITAINEQKPNFKIGTFMIPGKEKGQSLTVGAGDLAWSISATTKHPKEANAFVEYMTR
PEVMQKYYDVDGSPTAIEGVKQAGEDSPLAGMTEYAFTDRHLVWLQQYWTSEADFHTLTMNYVLTGDKQGMVNDLNAFFNPMK
ADVDZ

ID207 - 4123.1 (SEQ. ID. NO. 174)
ATGAAGAAAATCAAACCGCATGGACCGTTACCAAGTCAGACTCAGCTAGCTTATCTGGGAGATGAACTAGCAGCTTTTATCCA
CTTCGGTCCTAATACCTTTTATGACCAAGAATGGGGGACTGGACAGGAGGATCCTGAGCGCTTTAACCCGAGTCAGTTGGATG
CGCGTGAGTGGGTTCGTGTGCTCAAGGAAACGGGCTTCAAAAAGTTGATTTTGGTGGTCAAGCACCACGATGGCTTTGTCCTT
TATCCGACAGCTCACACAGATTATTCGGTTAAGGTCAGTCCTTGGAGGAGAGGAAAGGGCGACTTGCTCCTTGAAGTATCCCA

AGCTGCCACAGAGTTTGATATGGATATGGGGGTCTACCTGTCACCGTGGGATGCCCATAGTCCCCTCTATCATGTGGACCGAG
AAGCGGACTACAATGCCTATTATCTGGCTCAGTTGAAGGAAATCTTATCAAATCCTAACTATGGGAATGCTGGTAAGTTCGCT
GAGGTTTGGATGGATGGTGCCAGAGGAGAGGGCGCGCAAAAGGTTAATTATGAATTTGAAAAATGGTTTGAAACCATTCGTGA
CCTGCAGGGCGATTGCTTGATTTTTTCAACAGAAGGCACCAGTATCCGCTGGATTGGCAATGAACGAGGGTATGCAGGTGATC
CACTGTGGCAAAAGGTGAATCCTGATAAACTAGGAACAGAAGCAGAGCTGAACTATCTTCAGCACGGGGATCCCTCGGGCACG
ATTTTTTCAATCGGAGAGGCAGATGTTTCCATCCGTCCAGGCTGGTTCTACCATGAGGATCAGGATCCTAAGTCTCTCGAGGA
GTTGGTCGAAATCTACTTTCACTCAGTAGGGCGAGGAACTCCACTCTTGCTTAATATTCCGCCGAATCAAGCTGGGCTCTTTG
ATGCAAAGGATATTGAACGACTTTATGAATTTGCGACCTATCGCAATGAGCTCTATAAAGAAGATTTGGCTCTGGGAGCTGAG
GTATCTGGTCCAGCTCTTTCCGCAGACTTTGCTTGTCGCCATTTGACAGACGGCCTTGAGACCAGCTCTTGGGCAAGCGATGC
AGACTTGCCCATCCAGTTAGAACTCGACTTAGGTTCTCCTAAAACTTTTGATGTAATTGAGTTAAGAGAAGATTTGAAGCTAG
GGCAACGAATCGCTGCTTTTCATGTGCAAGTAGAGGTGGATGGTGTCTGGCAGGAGTTTGGTTCGGGTCATACTGTTGGTTAC
AAACGTCTCTTACGAGGAGCAGTTGTTGAGGCACAGAAGATACGTGTAGTCATTACAGAATCACAGGCTTTGCCTTTGTTGAC
CAAGATTTCCCTTTATAAAACTCCTGGATTATCAAAAAAAGAAGTTGTTCAGGAACTAGCATTTGCAGAAAAAAGCCTAGCTG
TGGCAAAGGGAGAAAATGCCTATTTTACAGTTAAGCGCAGAGAATGTAGTGGTCCTTTAGAAGCTAAGATTTCGATTCAACCG
GGGACAGGTGTCCATGGTGTCGCCTATCAGGATGAGATTCAAGTCCTTGCGTTTCAAACTGGTGAGACTGAAAAAAGTCTGAC
GCTACCAACCTTGTATTTCGCAGGAGATAAAACCTTGGATTTCTATCTGAACCTAACGGTGGATGGTCAGCTTGTGGATCAAC
TTCAAGTCCAAGTTTCATAA

(SEQ. ID. NO. 158)
MKKIKPHGPLPSQTQLAYLGDELAAFIHFGPNTFYDQEWGTGQEDPERFNPSQLDAREWVRVLKETGFKKLILVVKHHDGFVL
YPTAHTDYSVKVSPWRRGKGDLLLEVSQAATEFDMDMGVYLSPWDAHSPLYHVDREADYNAYYLAQLKEILSNPNYGNAGKFA
EVWMDGARGEGAQKVNYEFEKWFETIRDLQGDCLIFSTEGTSIRWIGNERGYAGDPLWQKVNPDKLGTEAELNYLQHGDPSGT
IFSIGEADVSIRPGWFYHEDQDPKSLEELVEIYFHSVGRGTPLLLNIPPNQAGLFDAKDIERLYEFATYRNELYKEDLALGAE
VSGPALSADFACRHLTDGLETSSWASDADLPIQLELDLGSPKTFDVIELREDLKLGQRIAAFHVQVEVDGVWQEFGSGHTVGY
KRLLRGAVVEAQKIRVVITESQALPLLTKISLYKTPGLSKKEVVQELAFAEKSLAVAKGENAYFTVKRRECSGPLEAKISIQP
GTGVHGVAYQDEIQVLAFQTGETEKSLTLPTLYFAGDKTLDFYLNLTVDGQLVDQLQVQVSZ

ID208 - 4125.12 (SEQ. ID. NO. 175)
ATGCTTGAAAGACTGAAAAGAATACATTATATGTTTTGGATCAGTTTAATTTTTATGATTTTCCCCATCCTGTCTGTAGTGAC
TGGGTGGCTTTCTGCCTGGCATTTATTGATTGATATTCTATTTGTAGTGGCATATTTGGGTGTTTTAACAACTAAGAGCCAGC
GCCTATCTTGGCTATATTGGGGCCTCATGCTGACTTATGTAGTTGGGAATACTGCCTTTGTTGCTGTTAATTATATCTGGTTT
TTCTTTTTCCTATCCAATCTCTTAAGTTATCATTTCAGCGTACGTAGTTTAAAGTCTTTACATGTCTGGACTTTTCTTCTTGC
TCAAGTCCTTGTTGTGGGGCAACTGTTGATTTTTCAGAGAATCGAAGTTGAGTTTCTATTCTATCTACTTGTAATTCTTACTT
TTGTCGATTTAATGACTTTTGGATTGGTTCGGATTCGTATTGTCGAGGATTTGAAAGAAGCTCAGGTCAAGCAAAATGCTCAG
ATAAATCTATTGCTTGCTGAAAATGAACGTAGTCGTATCGGTCAGGATTTGCATGATAGTCTGGGACATACCTTTGCTATGCT
GAGTGTCAAGACAGATTTAGCCTTGCAGTTATTTCAGATGGAGGCTTATCCACAGGTGGAAAAGGAATTAAAAGAAATTCACC
AGATCAGCAAGGATCCATGA

(SEQ. ID. NO. 159)
MLERLKRIHYMFWISLIFMIFPILSVVTGWLSAWHLLIDILFVVAYLGVLTTKSQRLSWLYWGLMLTYVVGNTAFVAVNYIWF
FFFLSNLLSYHFSVRSLKSLHVWTFLLAQVLVVGQLLIFQRIEVEFLFYLLVILTFVDLMTFGLVRIRIVEDLKEAQVKQNAQ
INLLLAENERSRIGQDLHDSLGHTFAMLSVKTDLALQLFQMEAYPQVEKELKEIHQISKDPZ

ID209 - 4126.3 (SEQ. ID. NO. 176)
ATGAATGATAAGTTAAAAATCTTCTTGTTGCTAGGAGTATTTTTTCTAGCCATAACCGGTTTCTATGTTCTATTGATACGAAA
TGCAGGGCAGACAGATGCCTCGCAAATTGAAAAGGCGGCAGTTAGCCAAGGAGGAAAAGCAGTGAAAAAAACAGAAATTAGTA
AAGACGCAGACTTGCACGAAATTTATCTAGCTGGAGGTTGTTTCTGGGGAGTGGAGGAATATTTCTCACGTGTTCCCGGGGTG
ACGGATGCCGTTTCAGGCTATGCAAATGGTAGAGGAGAAACAACCAAGTACGAATTGATTAACCAAACAGGTCATGCAGAAAC
CGTCCATGTCACCTATGATGCCAAGCAAATTTCTCTCAAGGAAATCCTGCTTCACTATTTCCGCATTATCAATCCAACCAGCA
AAAATAAACAAGGAAATGATGTGGGGACCCAGTACCGTACTGGTGTTTATTACACAGATGACAAGGATTTGGAAGTGATTAAC
CAAGTCTTTGATGAGGTGGCTAAGAAATACGATCAACCTCTAGCAGTTGAAAAGGAAAACTTGAAGAATTTTGTGGTGGCTGA
GGATTACCATCAAGACTATCTCAAGAAAAATCCAAATGGCTACTGCCATATCAATGTTAATCAGGCGGCCTATCCTGTCATTG
ATGCCAGCAAATATCCAAAACCAAGTGATGAGGAATTGAAAAAGACCCTGTCACCTGAGGAGTATGCAGTTACCCAGGAAAAT
CAAACAGAACGAGCTTTCTCAAACCGTTACTGGGATAAATTTGAATCCGGTATCTATGTGGATATAGCAACTGGGGAACCTCT
CTTTTCATCAAAAGACAAATTTGAGTCTGGTTGTGGCTGGCCTAGTTTTACCCAACCCATCAGTCCAGATGTTGTCACCTACA
AGGAAGATAAGTCCTACAATATGACGCGTATGGAAGTGCGGAGCCGAGTAGGAGATTCTCACCTTGGGCATGTCTTTACGGAT
GGTCCACAGGACAAGGGCGGCTTACGTTACTGTATCAATAGCCTCTCTATCCGCTTTATTCCCAAAGACCAAATGGAAGAAAA
AGgcTACGCTTATTTACTAGATTATGTTGATTAA

(SEQ. ID. NO. 160)
MNDKLKIFLLLGVFFLAITGFYVLLIRNAGQTDASQIEKAAVSQGGKAVKKTEISKDADLHEIYLAGGCFWGVEEYFSRVPGV
TDAVSGYANGRGETTKYELINQTGHAETVHVTYDAKQISLKEILLHYFRIINPTSKNKQGNDVGTQYRTGVYYTDDKDLEVIN
QVFDEVAKKYDQPLAVEKENLKNFVVAEDYHQDYLKKNPNGYCHINVNQAAYPVIDASKYPKPSDEELKKTLSPEEYAVTQEN
QTERAFSNRYWDKFESGIYVDIATGEPLFSSKDKFESGCGWPSFTQPISPDVVTYKEDKSYNMTRMEVRSRVGDSHLGHVFTD
GPQDKGGLRYCINSLSIRFIPKDQMEEKGYAYLLDYVDZ

ID210 - 4127.1 (SEQ. ID. NO. 177)
ATGAAAAAGAAATGGATGTATTATGCTGCTTGTTCTTCTAATGAATCTGCCGATGACAGTTCATCTGATAAAGGAGACGGCGG
TTCGCTAGTCGTTTATTCACCAAACTCAGAGGGCTTAATTGGAGCAACTATTCCTGCCTTTGAAGAAAAATATGGTATCAAAG
TAGAACTGATTCAAGCTGGTACTGGAGAACTTTTCAAAAAACTAGAGTCAGAAAAAGAAGTTCCTGTAGCTGATGTTATCTTT
GGTGGTTCTTATACACAATATACTACCCACGGAGAACTCTTTGAAAACTATACTTCAAAAGAAAATGATAATGTTATCAAAGA
ATATCAAAACACAACTGGCTACTCTACTCCTTATACACTAGATGGTAGTGTTTTAATCGTCAACCCTGATTTAACTAAAGGCA
TGAACATCGAAGGATATAACGATCTTTTCAAACCTGAACTAAAAGGAAAAATCGCAACTGCTGACCCAGCAAACTCTTCTAGC
GCCTTTGCTCAATTAACAAATATGCTACAAGCTCAAGGTGGTTACAAAGATGATAAGGCTTGGTCTTATGTAAAAGATCTTTT
CACACTTATTGATGGTAAAATCGGTTCAAGTTCATCTAGTGTCTATAAAGTAGTCGCTGATGGAGAAATGGCTGTTGGTCTCT
CTTATGAAGATCCAGCAGTTAAACTCTTAAATGACGGAGCTAACATTAAGGTAGTCTATCCAAAAGAAGGAACCGTCTTCCTA
CCTGCTAGTGCTGCTATCGTTAAAAAATCTAAAAATATGGAAAATGCCAAGAAATTTATCGATTTTATTATCTCTCAAGAAGT

ACAAGATACACTTGGTACAACCACTACTAACCGTCCTGTTCGTAAAAATGCTAAAACAAGCGAAAACATGAAACCAATTGACA
AAATCAAAACACTCACTGAAGATTATGATTATGTCATCAAGAATAAATCAGATATCGTTAAGAAATACAACGAAGTCTTTACA
GATATCCAATCTAAACAGTAA

(SEQ. ID. NO. 161)
MKKKWMYYAACSSNESADDSSSDKGDGGSLVVYSPNSEGLIGATIPAFEEKYGIKVELIQAGTGELFKKLESEKEVPVADVIF
GGSYTQYTTHGELFENYTSKENDNVIKEYQNTTGYSTPYTLDGSVLIVNPDLTKGMNIEGYNDLFKPELKGKIATADPANSSS
AFAQLTNMLQAQGGYKDDKAWSYVKDLFTLIDGKIGSSSSSVYKVVADGEMAVGLSYEDPAVKLLNDGANIKVVYPKEGTVFL
PASAAIVKKSKNMENAKKFIDFIISQEVQDTLGTTTTNRPVRKNAKTSENMKPIDKIKTLTEDYDYVIKNKSDIVKKYNEVFT
DIQSKQZ

ID211 - 4127.2 (SEQ. ID. NO. 178)
ATGAGTGAGATCAAAATTATTAACGCCAAAAAAATCTACCACGATGTCCCTGTTATTGAGAATTTGAACATTACAATTCCAAA
AGGAAGTCTCTTTACCCTTCTTGGAGCTTCAGGATGTGGGAAAACGACCCTTCTTCGTATGATTGCAGGTTTCAACAGTATCG
AAGGTGGAGAATTTTACTTCGATGATACAAAAATCAATAATATGGAACCCAGCAAACGCAATATCGGGATGGTTTTCCAAAAC
TACGCTATTTTCCCACATTTGACTGTCCGAGACAACGTTGCTTTTGGTCTTATGCAAAAGAAGGTTCCAAAAGAAGAATTGAT
TCAACAGACCAACAAGTATCTTGAACTCATGCAAATTGCTCAATATGCGGATCGAAAGCCCGATAAACTCAGTGGTGGACAAC
AACAACGTGTCACCTTGGCATGCGCCTTAGCGGTTAATCCAAGTGTTCTCCTCATGGACGAGCCACTTAGTAATCTGGAGGCC
AAACTTCGCTTGGATATGCGTCAAGCCATCCGAGAAATCCAACACGAAGTGGGAATTACAACTGTTTATGTAACCCACGACCA
AGAAGAAGCCATGGCTATTTCAGACCAAATTGCTGTTATGAAAGATGGGGTGATCCAACAAATCGGCCGACCAAAAGAACTCT
ATCATAAACCAGCTAATGAGTTTGTGGCAACCTTTATCGGACGCACAAATATTATCCCTGCCAATCTTGAAAAACGGAGCGAC
GGCGCTTATATCGTCTTTTCAGATGGCTATGCCCTTCGAATGCCAGCTCTTGATCAGGTTGAGGAGCAAGCTATTCATGTAAG
CATTCGTCCCGAAGAGTTTATCAAAGATGAATCTGGAGATATTGAAGGAACTATTAGAGATAGCGTCTATCTTGGACTAAATA
CGGATTATTTCATTGAGACAGGTTTTGCCTCAAAAATTCAAGTTAGTGAAGAATCAACTTTTGAAGAAGATCTACAAAAAGGC
AATCGTATTCGTCTACGAATCAATACGCAAAAATTAAACATCTTTTCTGCAGATGGTTCCCAAAACCTGATAAAAGGAGTCAA
CCATGGAACGTAA

(SEQ. ID. NO. 162)
MSEIKIINAKKIYHDVPVIENLNITIPKGSLFTLLGASGCGKTTLLRMIAGFNSIEGGEFYFDDTKINNMEPSKRNIGMVFQN
YAIFPHLTVRDNVAFGLMQKKVPKEELIQQTNKYLELMQIAQYADRKPDKLSGGQQQRVTLACALAVNPSVLLMDEPLSNLEA
KLRLDMRQAIREIQHEVGITTVYVTHDQEEAMAISDQIAVMKDGVIQQIGRPKELYHKPANEFVATFIGRTNIIPANLEKRSD
GAYIVFSDGYALRMPALDQVEEQAIHVSIRPEEFIKDESGDIEGTIRDSVYLGLNTDYFIETGFASKIQVSEESTFEEDLQKG
NRIRLRINTQKLNIFSADGSQNLIKGVNHGTZ

ID212 - 4136.1 (SEQ. ID. NO. 179)
ATGAAGAAAAAATTATTGGCAGGTGCCATCACACTATTATCAGTAGCAACTTTAGCAGCTTGTTCGAAAGGGTCAGAAGGTGC
AGACCTTATCAGCATGAAAGGGGATGTCATTACAGAACATCAATTTTATGAGCAAGTGAAAAGCAACCCTTCAGCCCAACAAG
TCTTGTTAAATATGACCATCCAAAAAGTTTTTGAAAAACAATATGGCTCAGAGCTTGATGATAAAGAGGTTGATGATACTATT
GCCGAAGAAAAAAAAACAATATGGCGAAAACTACCAACGTGTCTTGTCACAAGCAGGTATGACTCTTGAAACACGTAAAGCTCA
AATTCGTACAAGTAAATTAGTTGAGTTGGCAGTTAAGAAGGTAGCAGAAGCTGAATTGACAGATGAAGCCTATAAGAAAGCCT
TTGATGAGTACACTCCAGATGTAACGGCTCAAATCATCCGTCTTAATAATGAAGATAAGGCCAAAGAAGTTCTCGAAAAAGCC
AAGGCAGAAGGTGCTGATTTTGCTCAATTAGCCAAAGATAATTCAACTGATGAAAAAACAAAAGAAAATGGTGGAGAAATTAC
CTTTGATTCTGCTTCAACAGAAGTACCTGAGCAAGTCAAAAAAGCCGCTTTCGCTTTAGATGTGGATGGTGTTTCTGATGTGA
TTACAGCAACTGGCACACAAGCCTACAGTAGCCAATATTACATTGTAAAACTCACTAAGAAAACAGAAAAATCATCTAATATT
GATGACTACAAAGAAAAATTAAAAACTGTTATCTTGACTCAAAAACAAAATGATTCAACATTTGTTCAAAGCATTATCGGAAA
AGAATTGCAAGCAGCCAATATCAAGGTTAAGGACCAAGCCTTCCAAAATATCTTTACCCAATATATCGGTGGTGGAGATTCAA
GCTCAAGCAGTAGTACATCAAACGAATAG

(SEQ. ID. NO. 163)
MKKKLLAGAITLLSVATLAACSKGSEGADLISMKGDVITEHQFYEQVKSNPSAQQVLLNMTIQKVFEKQYGSELDDKEVDDTI
AEEKKQYGENYQRVLSQAGMTLETRKAQIRTSKLVELAVKKVAEAELTDEAYKKAFDEYTPDVTAQIIRLNNEDKAKEVLEKA
KAEGADFAQLAKDNSTDEKTKENGGEITFDSASTEVPEQVKKAAFALDVDGVSDVITATGTQAYSSQYYIVKLTKKTEKSSNI
DDYKEKLKTVILTQKQNDSTFVQSIIGKELQAANIKVKDQAFQNIFTQYIGGGDSSSSSSTSNEZ

ID213 - 4137.3 (SEQ. ID. NO. 180)
ATGAAAAAAAATATTAAACAATATGTAACCTTAGGTACTGTAGTGGTATTATCAGCATTTGTTGCTAACTCAGTTGCAGCTCA
GGAGACTGAAACTTCTGAAGTATCAACACCAAAGTTGGTGCAACCTGTTGCACCAACGACTCCGATTTCGGAAGTACAACCTA
CATCGGATAACTCTTCGGAAGTTACTGTACAACCTCGAACAGTTGAAACTACTGTTAAGGATCCATCTTCTACAGCGGAAGAA
ACTCCTGTCTTAGAAAAAAATAATGTTACTTTAACAGGGGGCGGAGAAAATGTTACTAAAGAGTTAAAGGATAAATTTACTAG
CGGTGACTTTACTGTAGTGATTAAGTACAATCAGTCAAGTGAGAAAGGCTTACAAGCTCTGTTTGGAATATCTAATTCCAAAC
CCGGTCAACAAAATAGTTATGTAGATGTGTTCCTTAGAGACAATGGTGAGTTGGGGATGGAAGCGCGTGATACTTCTTCCAAT
AAAAATAACCTAGTATCCAGACCTGCTTCAGTTTGGGGTAAGTACAAACAAGAGGCTGTGACTAACACTGTTGCAGTAGTAGC
AGATTCAGTCAAAAAAACATATTCTTTATACGCAAATGGTACAAAAGTAGTAGAAAAGAAAGTGGATAATTTCCTAAACATCA
AGGATATTAAAGGTATTGATTACTATATGCTTGGGGGAGTGAAACGTGCAGGAAAAACGGCGTTTGGTTTTAACGGAACACTA
GAAAATATCAAATTCTTTAATAGTGCATTGGATGAAGAAACTGTTAAAAAGATGACAACAAACGCTGTTACTGGACATTTAAT
TTATACGGCTAATGATACAACAGGTTCTAACTATTTCCGTATTCCAGTTCTGTATACTTTTAGCAATGGTCGGGTATTTTCAA
GCATTGACGCTCGTTACGGTGGAACTCATGATTTCTTGAATAAAATTAATATTGCTACAAGTTATAGTGATGATAATGGTAAG
ACATGGACTAAACCAAAATTAACATTGGCATTCGATGATTTTGCGCCAGTACCATTAGAATGGCCTCGTGAAGTTGGTGGACG
TGACTTACAAATCAGCGGTGGTGCAACCTATATTGACTCTGTTATTGTTGAAAAAAAGAACAAACAAGTACTCATGTTTGCTG
ATGTGATGCCTGCTGGAGTAAGTTTTAGAGAAGCAACTAGAAAAGATTCAGGTTATAAACAAATTGATGGTAATTATTACCTT
AAATTAAGGAAACAAGGTGATACTGATTACAATTATACTATTCGTGAGAATGGTACTGTATACGACGATCGTACCAACAGACC
AACTGAATTTTCAGTAGATAAAAATTTCGGTATTAAACAAAATGGTAATTATTTGACGGTAGAGCGG

(SEQ. ID. NO. 164)

MKKNIKQYVTLGTVVVLSAFVANSVAAQETETSEVSTPKLVQPVAPTTPISEVQPTSDNSSEVTVQPRTVETTVKDPSSTAEE
TPVLEKNNVTLTGGGENVTKELKDKFTSGDFTVVIKYNQSSEKGLQALFGISNSKPGQQNSYVDVFLRDNGELGMEARDTSSN
KNNLVSRPASVWGKYKQEAVTNTVAVVADSVKKTYSLYANGTKVVEKKVDNFLNIKDIKGIDYYMLGGVKRAGKTAFGFNGTL
ENIKFFNSALDEETVKKMTTNAVTGHLIYTANDTTGSNYFRIPVLYTFSNGRVFSSIDARYGGTHDFLNKINIATSYSDDNGK
TWTKPKLTLAFDDFAPVPLEWPREVGGRDLQISGGATYIDSVIVEKKNKQVLMFADVMPAGVSFREATRKDSGYKQIDGNYYL
KLRKQGDTDYNYTIRENGTVYDDRTNRPTEFSVDKNFGIKQNGNYLTVER

ID214 - 4185 (SEQ. ID. NO. 181)
ATGAAAAAATTTAGCCTATTACTAGCTATCCTACCATTTTTGGTTGCCTGTGAGAATCAAGCTACACCCAAAGAGACTAGCGC
TCAAAAGACAATCGTCCTTGCTACAGCTGGCGACGTGCCACCATTTGACTACGAAGACAAGGGCAATCTGACAGGCTTTGATA
TCGAAGTTTTAAAGGCAGTAGATGAAAAACTCAGCGACTACGAGATTCAATTCCAAAGAACCGCCTGGGAGAGCATCTTCCCA
GGACTTGATTCTGGTCACTATCAGGCTGCGGCCAATAACTTGAGTTACACAAAAGAGCGTGCTGAAAAATACCTTTACTCGCT
TCCAATTTCCAACAATCCCCTCGTCCTTGTCAGCAACAAGAAAAATCCTTTGACTTCTCTTGACCAGATCGCTGGTAAAACAA
CACAAGAGGATACCGGAACTTCTAACGCTCAATTCATCAATAACTGGAATCAGAAACACACTGATAATCCCGCTACAATTAAT
TTTTCTGGTGAGGATATTGGTAAACGAATCCTAGACCTTGCTAACGGAGAGTTTGATTTCCTAGTTTTTGACAAGGTATCCGT
TCAAAAGATTATCAAGGACCGTGGTTTAGACCTCTCAGTCGTTGATTTACCTTCTGCAGATAGCCCCAGCAATTATATCATTT
TCTCAAGCGACCAAAAAGAGTTTAAAGAGCAATTTGATAAAGCGCTCAAAGAACTCTATCAAGACGGAACCCTTGAAAAACTC
AGCAATACCTATCTAGGTGGTTCTTACCTCCCAGATCAATCTCAGTTACAATAA

(SEQ. ID. NO. 165)
MKKFSLLLAILPFLVACENQATPKETSAQKTIVLATAGDVPPFDYEDKGNLTGFDIEVLKAVDEKLSDYEIQFQRTAWESIFP
GLDSGHYQAAANNLSYTKERAEKYLYSLPISNNPLVLVSNKKNPLTSLDQIAGKTTQEDTGTSNAQFINNWNQKHTDNPATIN
FSGEDIGKRILDLANGEFDFLVFDKVSVQKIIKDRGLDLSVVDLPSADSPSNYIIFSSDQKEFKEQFDKALKELYQDGTLEKL
SNTYLGGSYLPDQSQLQZ

ID215 - 4211.1 (SEQ. ID. NO. 182)
ATGAAAAAAAATAGTTTATATATCATATCCTCACTCTTTTTTGCTTGTGTCTTATTTGTCTATGCTACGGCGACGAATTTTCA
AAACAGTACCAGTGCTAGGCAGGTAAAAACGGAAACCTATACTAATACAGTAACAAATGTCCCTATTGACATACGCTATAATA
GTGATAAGTATTTTATTAGCGGTTTTGCTTCAGAAGTATCAGTGGTCTTGACTGGTGCAAATCGCCTATCGCTAGCTAGTGAA
ATGCAAGAAAGTACACGTAAATTCAAGGTTACTGCTGACCTAACAGATGCCGGTGTTGGAACGATTGAAGTTCCTTTGAGCAT
TGAAGATTTACCCAATGGGCTGACCGCTGTGGCGACTCCGCAAAAAATTACAGTCAAGATTGGTAAGAAGGCTCAGAAGGATA
AGGTAAAGATTGTACCAGAGATTGACCCTAGTCAAATTGATAGTCGGGTACAAATTGAAAATGTCATGGTGTCAGATAAAGAA
GTGTCTATTACGAGTGACCAAGAGACATTGGATAGAATTGATAAGATTATCGCTGTTTTGCCAACTAGCGAACGTATAACAGG
TAATTACAGTGGTTCAGTACCTTTGCAGGCAATCGACCGCAATGGTGTTGTCTTACCGGCAGTTATCACTCCGTTTGATACAA
TAATGAAGGTGACTACAAAACCAGTAGCACCAAGTTCAAGCACATCAAATTCAAGTACAAGCAGTTCATCGGAGACATCTTCG
TCAACGAAAGCAACTAGTTCAAAAACGAATTAA

(SEQ. ID. NO. 166)
MKKNSLYIISSLFFACVLFVYATATNFQNSTSARQVKTETYTNTVTNVPIDIRYNSDKYFISGFASEVSVVLTGANRLSLASE
MQESTRKFKVTADLTDAGVGTIEVPLSIEDLPNGLTAVATPQKITVKIGKKAQKDKVKIVPEIDPSQIDSRVQIENVMVSDKE
VSITSDQETLDRIDKIIAVLPTSERITGNYSGSVPLQAIDRNGVVLPAVITPFDTIMKVTTKPVAPSSSTSNSSTSSSSETSS
STKATSSKTNZ

ID216 - 4127.3 (SEQ. ID. NO. 183)
ATGTTGATTGGCGAAGGGTATCGGACTTTCCCTGTCCTGATTTATACCCAATTTATTAGCGAGGTTGGAGGAAATTCTGCTTT
TGCAATTATGGCGATTATCATTGCCTTGGCAATTTTCCTTATCCAAAAACACATTGCAAACCGCTACAGTTTCAGCATGAATC
TGCTCCATCCAATTGAGCCTAAAAAAACTACAAAAGGAAAAATGGCTGCCATTTATGCAACAGTCTACGGAATTATCTTTATC
TCTGTTTTACCTCAAATCTACTTAATTTATACCTCTTTCCTAAAAACATCAGGTATGGTATCTGTTAAAGGTTATTCTCCAAA
CAGTTACAAGGTAGCTTTCCATCGTATGGGATCTGCTATTTTCAATACCATTCGTATCCCTTTGATTGCCTTAGTTCTAGTTG
TTCTATTTGCGACATTTATCTCCTACCTAGCCGTTAGAAAACGGAATTTGTTTACAAACTTAATTGACAGCCTCAGTATGGTA
CCTTATATTGTACCAGGAACCGTTCTAGGGATTGCCTTCATTTCTTCCTTCAATACTGGTCTATTTGGAAGTGGATTTCTTAT
GATTACAGGGACTGCTTTCATCTTGATTATGTCTCTATCTGCCAGAAGATTACCTTATACTATTCGCTCATCTGTTGCTAGCT
TACAACAAATAGCACCAAGTATTGAAGAAGCTGCTGAAAGCTTAGGAAGTAGTCGTCTCAATACCTTTGCTAAGATTACAACT
CCAATGATGCTATCTGGTATCATTTCTGGAGCCATCTTATCTTGA

(SEQ. ID. NO. 167)
MLIGEGYRTFPVLIYTQFISEVGGNSAFAIMAIIIALAIFLIQKHIANRYSFSMNLLHPIEPKKTTKGKMAAIYATVYGIIFI
SVLPQIYLIYTSFLKTSGMVSVKGYSPNSYKVAFHRMGSAIFNTIRIPLIALVLVVLFATFISYLAVRKRNLFTNLIDSLSMV
PYIVPGTVLGIAFISSFNTGLFGSGFLMITGTAFILIMSLSARRLPYTIRSSVASLQQIAPSIEEAAESLGSSRLNTFAKITT
PMMLSGIISGAILSZ

Table 4

ID301 (SEQ. ID. NO. 196)

ATGAATAAGAAAAAAATGATTTTAACAAGTCTAGCCAGCGTCGCTATCTTAGGGGCTGGTTTTGTTACGTCTCAGCCTACTTT
TGTAAGAGCAGAAGAATCTCCACAAGTTGTCGAAAAATCTTCATTAGAGAAGAAATATGAGGAAGCAAAAGCAAAAGCTGATA
CTGCCAAGAAAGATTACGAAACGGCTAAAAAGAAAGCAGAAGACGCTCAGAAAAAGTATGAAGATGATCAGAAGAGAACTGAG
GAGAAAGCTCGAAAAGAAGCAGAAGCATCTCAAAAATTGAATGATGTGGCGCTTGTTGTTCAAAATGCATATAAAGAGTACCG
AGAAGTTCAAAATCAACGTAGTAAATATAAATCTGACGCTGAATATCAGAAAAAATTAACAGAGGTCGACTCTAAAATAGAGA
AGGCTAGGAAAGAGCAACAGGACTTGCAAAATAAATTTAATGAAGTAAGAGCAGTTGTAGTTCCTGAACCAAATGCGTTGGCT
GAGACTAAGAAAAAAGCAGAAGAAGCTAAAGCAGAAGAAAAAGTAGCTAAGAGAAAATATGATTATGCAACTCTAAAGGTAGC
ACTAGCGAAGAAAGAAGTAGAGGCTAAGGAACTTGAAATTGAAAAACTTCAATATGAAATTTCTACTTTGGAACAAGAAGTTG
CTACTGCTCAACATCAAGTAGATAATTTGAAAAAACTTCTTGCTGGTGCGGATCCTGATGATGGCACAGAAGTTATAGAAGCT
AAATTAAAAAAAGGAGAAGCTGAGCTAAACGCTAAACAAGCTGAGTTAGCAAAAAAACAAACAGAACTTGAAAAACTTCTTGA
CAGCCTTGATCCTGAAGGTAAGACTCAGGATGAATTAGATAAAGAAGCAGAAGAAGCTGAGTTGGATAAAAAAGCTGATGAAC
TTCAAAATAAAGTTGCTGATTTAGAAAAAGAAATTAGTAACCTTGAAATATTACTTGGAGGGGCTGATCCTGAAGATGATACT
GCTGCTCTTCAAAATAAATTAGCTGCTAAAAAAGCTGAGTTAGCAAAAAAACAAACAGAACTTGAAAAACTTCTTGACAGCCT
TGATCCTGAAGGTAAGACTCAGGATGAATTAGATAAAGAAGCAGAAGAAGCTGAGTTGGATAAAAAAGCTGATGAACTTCAAA
ATAAAGTTGCTGATTTAGAAAAAGAAATTAGTAACCTTGAAATATTACTTGGAGGGGCTGATTCTGAAGATGATACTGCTGCT
CTTCAAAATAAATTAGCTACTAAAAAAGCTGAATTGGAAAAAACTCAAAAAGAATTAGATGCAGCTCTTAATGAGTTAGGCCC
TGATGGAGATGAAGAAGAAACTCCAGCGCCGGCTCCTCAACCAGAGCAACCAGCTCCTGCACCAAAACCAGAGCAACCAGCTC
CAGCTCCAAAACCAGAGCAACCAGCTCCTGCACCAAAACCAGAGCAACCAGCTCCAGCTCCAAAACCAGAGCAACCAGCTCCA
GCTCCAAAACCAGAGCAACCAGCTAAGCCGGAGAAACCAGCTGAAGAGCCTACTCAACCAGAAAAACCAGCCACTCCAAAAAC
AGGCTGGAAACAAGAAAACGGTATGTGGTATTTCTACAATACTGATGGTTCAATGGCAATAGGTTGGCTCCAAAACAACGGTT
CATGGTACTACCTAAACGCTAACGGCGCTATGGCAACAGGTTGGGTGAAAGATGGAGATACCTGGTACTATCTTGAAGCATCA
GGTGCTATGAAAGCAAGCCAATGGTTCAAAGTATCAGATAAATGGTACTATGTCAACAGCAATGGCGCTATGGCGACAGGCTG
GCTCCAATACAATGGCTCATGGTACTACCTCAACGCTAATGGTGATATGGCGACAGGATGGCTCCAATACAACGGTTCATGGT
ATTACCTCAACGCTAATGGTGATATGGCGACAGGATGGGCTAAAGTCAACGGTTCATGGTACTACCTAAACGCTAACGGTGCT
ATGGCTACAGGTTGGGCTAAAGTCAACGGTTCATGGTACTACCTAAACGCTAACGGTTCAATGGCAACAGGTTGGGTGAAAGA
TGGAGATACCTGGTACTATCTTGAAGCATCAGGTGCTATGAAAGCAAGCCAATGGTTCAAAGTATCAGATAAATGGTACTATG
TCAATGGCTTAGGTGCCCTTGCAGTCAACACAACTGTAGATGGCTATAAAGTCAATGCCAATGGTGAATGGGTTTAA

(SEQ. ID. NO. 184)

MNKKKMILTSLASVAILGAGFVTSQPTFVRAEESPQVVEKSSLEKKYEEAKAKADTAKKDYETAKKKAEDAQKKYEDDQKRTE
EKARKEAEASQKLNDVALVVQNAYKEYREVQNQRSKYKSDAEYQKKLTEVDSKIEKARKEQQDLQNKFNEVRAVVVPEPNALA
ETKKKAEEAKAEEKVAKRKYDYATLKVALAKKEVEAKELEIEKLQYEISTLEQEVATAQHQVDNLKKLLAGADPDDGTEVIEA
KLKKGEAELNAKQAELAKKQTELEKLLDSLDPEGKTQDELDKEAEEAELDKKADELQNKVADLEKEISNLEILLGGADPEDDT
AALQNKLAAKKAELAKKQTELEKLLDSLDPEGKTQDELDKEAEEAELDKKADELQNKVADLEKEISNLEILLGGADSEDDTAA
LQNKLATKKAELEKTQKELDAALNELGPDGDEEETPAPAPQPEQPAPAPKPEQPAPAPKPEQPAPAPKPEQPAPAPKPEQPAP
APKPEQPAKPEKPAEEPTQPEKPATPKTGWKQENGMWYFYNTDGSMAIGWLQNNGSWYYLNANGAMATGWVKDGDTWYYLEAS
GAMKASQWFKVSDKWYYVNSNGAMATGWLQYNGSWYYLNANGDMATGWLQYNGSWYYLNANGDMATGWAKVNGSWYYLNANGA
MATGWAKVNGSWYYLNANGSMATGWVKDGDTWYYLEASGAMKASQWFKVSDKWYYVNGLGALAVNTTVDGYKVNANGEWVZ

ID302 (SEQ. ID. NO. 197)

ATGTTTGCATCAAAAAGCGAAAGAAAAGTACATTATTCAATTCGTAAATTTAGTGTTGGAGTAGCTAGTGTAGTTGTTGCCAG
TCTTGTTATGGGAAGTGTGGTTCATGCGACAGAGAACGAGGGAGCTACCCAAGTACCCACTTCTTCTAATAGGGCAAATGAAA
GTCAGGCAGAACAAGGAGAACAACCTAAAAAACTCGATTCAGAACGAGATAAGGCAAGGAAAGAGGTCGAGGAATATGTAAAA
AAAATAGTGGGTGAGAGCTATGCAAAATCAACTAAAAAGCGACATACAATTACTGTAGCTCTAGTTAACGAGTTGAACAACAT
TAAGAACGAGTATTTGAATAAAATAGTTGAATCAACCTCAGAAAGCCAACTACAGATACTGATGATGGAGAGTCGATCAAAAG
TAGATGAAGCTGTGTCTAAGTTTGAAAAGGACTCATCTTCTTCGTCAAGTTCAGACTCTTCCACTAAACCGGAAGCTTCAGAT
ACAGCGAAGCCAAACAAGCCGACAGAACCAGGAGAAAAGGTAGCAGAAGCTAAGAAGAAGGTTGAAGAAGCTGAGAAAAAAGC
CAAGGATCAAAAAGAAGAAGATCGTCGTAACTACCCAACCATTACTTACAAAACGCTTGAAATTGCTGAGTCCGATG
TGGAAGTTAAAAAAGCGGAGCTTGAACTAGTAAAAGTGAAAGCTAACGAACCTCGAGACGAGCAAAAAATTAAGCAAGCAGAA
GCGGAAGTTGAGAGTAAACAAGCTGAGGCTACAAGGTTAAAAAAAATCAAGACAGATCGTGAAGAAGCAGAAGAAGAAGCTAA
ACGAAGAGCAGATGCTAAAGAGCAAGGTAAACCAAAGGGGCGGGCAAAACGAGGAGTTCCTGGAGAGCTAGCAACACCTGATA
AAAAAGAAAATGATGCGAAGTCTTCAGATTCTAGCGTAGGTGAAGAAACTCTTCCAAGCCCATCCCTGAAACCAGAAAAAAAG
GTAGCAGAAGCTGAGAAGAAGGTTGAAGAAGCTAAGAAAAAAGCCGAGGATCAAAAAGAAGAAGAATATAATCGCTTGACTCAA
CAATACTTACAAAACGCTTGAACTTGAAATTGCTGAGTCCGATGTGGAAGTTAAAAAAGCGGAGCTTGAACTAGTAAAAGAGG
AAGCTAAGGAACCTCGAAACGAGGAAAAAGTTAAGCAAGCAAAAGCGGAAGTTGAGAGTAAAAAAGCTGAGGCTACAAGGTTA
GAAAAAATCAAGACAGATCGTAAAAAAGCAGAAGAAGAAGCTAAACGAAAAGCAGCAGAAGAAGATAAAGTTAAAGAAAAACC
AGCTGAACAACCACAACCAGCGCCGGCTCCAAAAGCAGAAAAACCAGCTCCAGCTCCAAAACCAGAGAATCCAGCTGAACAAC
CAAAAGCAGAAAAACCAGCTGATCAACAAGCTGAAGAAGACTATGCTCGTAGATCAGAAGAAGAATATAATCGCTTGACTCAA
CAGCAACCGCCAAAAACTGAAAAACCAGCACAACCATCTACTCCAAAAACAGGCTGGAAACAAGAAAACGGTATGTGGTACTT
CTACAATACTGATGGTTCAATGGCGACAGGATGGCTCCAAAACAATGGCTCATGGTACTACCTCAACAGCAATGGCGCTATGG
CGACAGGATGGCTCCAAAACAATGGTTCATGGTACTATCTAAACGCTAATGGTTCAATGGCAACAGGATGGCTCCAAAACAAT
GGTTCATGGTACTACCTAAACGCTAATGGTTCAATGGCGACAGGATGGCTCCAATACAATGGCTCATGGTACTACCTAAACGC
TAATGGTTCAATGGCGACAGGATGGCTCCAATACAATGGCTCATGGTACTACCTAAACGCTAATGGTGATATGGCGACAGGTT
GGGTGAAAGATGGAGATACCTGGTACTATCTTGAAGCATCAGGTGCTATGAAAGCAAGCCAATGGTTCAAAGTATCAGATAAA
TGGTACTATGTCAATGGCTCAGGTGCCCTTGCAGTCAACACAACTGTAGATGGCTATGGAGTCAATGCCAATGGTGAATGGGT
AAACTAA

(SEQ. ID. NO. 185)

MFASKSERKVHYSIRKFSVGVASVVVASLVMGSVVHATENEGATQVPTSSNRANESQAEQGEQPKKLDSERDKARKEVEEYVK
KIVGESYAKSTKKRHTITVALVNELNNIKNEYLNKIVESTSESQLQILMMESRSKVDEAVSKFEKDSSSSSSSDSSTKPEASD
TAKPNKPTEPGEKVAEAKKKVEEAEKKAKDQKEEDRRNYPTITYKTLELEIAESDVEVKKAELELVKVKANEPRDEQKIKQAE
AEVESKQAEATRLKKIKTDREEAEEEAKRRADAKEQGKPKGRAKRGVPGELATPDKKENDAKSSDSSVGEETLPSPSLKPEKK
VAEAEKKVEEAKKKAEDQKEEDRRNYPTNTYKTLELEIAESDVEVKKAELELVKEEAKEPRNEEKVKQAKAEVESKKAEATRL
EKIKTDRKKAEEEAKRKAAEEDKVKEKPAEQPQPAPAPKAEKPAPAPKPENPAEQPKAEKPADQQAEEDYARRSEEEYNRLTQ

QQPPKTEKPAQPSTPKTGWKQENGMWYFYNTDGSMATGWLQNNGSWYYLNSNGAMATGWLQNNGSWYYLNANGSMATGWLQNNGSWYYLNANGSMATGWLQYNGSWYYLNANGSMATGWLQYNGSWYYLNANGDMATGWVKDGDTWYYLEASGAMKASQWFKVSDKWYYVNGSGALAVNTTVDGYGVNANGEWVNZ

ID303 (SEQ. ID. NO. 198)
ATGGTAAAAAGACGTATAAGGAGAGGGACGAGAGAACCTGAAAAAGTTGTTGTTCCTGAGCAATCATCTATTCCTTCGTATCC
TGTATCTGTTACATCTAACCAAGGAACAGATGTAGCAGTAGAACCAGCTAAAGCAGTTGCTCCAACAACAGACTGGAAACAAG
AAAATGGTATGTGGTATTTTTATAATACTGATGGTTCCATGGCAACAGGTTGGGTACAAGTTAATAGTTCATGGTACTACCTC
AACAGCAACGGTTCTATGAAAGTCAATCAATGGTTCCAAGTTGGTGGTAAATGGTATTATGTAAATACATCGGGTGAGTTAGC
GGTCAATACAAGTATAGATGGCTATAGAGTCAATGATAATGGTGAATGGGTGCGTTAA

(SEQ. ID. NO. 186)
MVKRRIRRGTREPEKVVVPEQSSIPSYPVSVTSNQGTDVAVEPAKAVAPTTDWKQENGMWYFYNTDGSMATGWVQVNSSWYYL
NSNGSMKVNQWFQVGGKWYYVNTSGELAVNTSIDGYRVNDNGEWVRZ

ID304 (SEQ. ID. NO. 199)
CTGAATACAAGTTTTGTTCATGCTGCTGATGGGATTCAATATGTCAGAGATGATACTAGAGATAAAGAAGAGGGAATAGAGTA
TGATGACGCTGACAATGGGGATATTATTGTAAAAGTAGCGACTAAACCTAAGGTAGTAACCAAGAAAATTTCAAGTACGCGAA
TTCGTTATGAAAAAGATGAAACAAAAGACCGTAGTGAAAATCCTGTTACAATTGATGGAGAGGATGGCTATGTAACTACGACA
AGGACCTACGATGTTAATCCAGAGACTGGTTATGTTACCGAACAGGTTACTGTTGATAGAAAAGAAGCCACGGATACAGTTAT
CAAAGTTCCAGCTAAAAGCAAGGTTGAAGAAGTTCTTGTTCCATTTGCTACTAAATATGAAGCAGACAATGACCTTTCTGCAG
GACAGGAGCAAGAGATTACTCTAGGAAAGAATGGGAAAACAGTTACAACGATAACTTATAATGTAGATGGAAAGAGTGGACAA
GTAACTGAGAGTACTTTAAGTCAAAAAAAAGACTCTCAAACAAGAGTTGTTAAAAAAAGAACCAAGCCCCAAGTTCTTGTCCA
AGAAATTCCAATCGAAACAGAATATCTCGATGGCCCAACTCTTGATAAAAGTCAAGAAGTAGAAGAAGTAGGAGAAATTGGTA
AATTACTCTTACTACAATCTATACTGTAG

(SEQ. ID. NO. 187)
LNTSFVHAADGIQYVRDDTRDKEEGIEYDDADNGDIIVKVATKPKVVTKKISSTRIRYEKDETKDRSENPVTIDGEDGYVTTT
RTYDVNPETGYVTEQVTVDRKEATDTVIKVPAKSKVEEVLVPFATKYEADNDLSAGQEQEITLGKNGKTVTTITYNVDGKSGQ
VTESTLSQKKDSQTRVVKKRTKPQVLVQEIPIETEYLDGPTLDKSQEVEEVGEIGKLLLLQSILZ

ID305 (SEQ. ID. NO. 200)
ATGAAGCTTTTGAAAAAAATGATGCAAATCGCACTAGCCACATTTTTCTTCGGTTTGTTAGCGACAAATACAGTATTTGCAGA
TGATTCTGAAGGATGGCAGTTTGTCCAAGAAAATGGTAGAACCTACTACAAAAAGGGGGATCTAAAAGAAACCTACTGGAGAG
TGATAGATGGGAAGTACTATTATTTTGATCCTTTATCCGGAGAGATGGTTGTCGGCTGGCAATATATACCTGCTCCACACAAG
GGGGTTACGATTGGTCCTTCTCCAAGAATAGAGATTGCTCTTAGACCAGATTGGTTTTATTTTGGTCAAGATGGTGTATTACA
AGAATTTGTTGGCAAGCAAGTTTTAGAAGCAAAAACTGCTACGAATACCAACAAACATCATGGGGAAGAATATGATAGCCAAG
CAGAGAAACGAGTCTATTATTTTGAAGATCAGCGTAGTTATCATACTTTAAAAACTGGTTGGATTTATGAAGAGGGTCATTGG
TATTATTTACAGAAGGATGGTGGCTTTGATTCGCGCATCAACAGATTGACGGTTGGAGAGCTAGCACGTGGTTGGGTTAAGGA
TTACCCTCTTACGTATGATGAAGAGAAGCTAAAAGCAGCTCCATGGTACTATCTAAATCCAGCAACTGGCATTATGCAAACAG
GTTGGCAATATCTAGGTAATAGATGGTACTACCTCCATTCGTCAGGAGCTATGGCAACTGGCTGGTATAAGGAAGGCTCAACT
TGGTACTATCTAGATGCTGAAAATGGTGATATGAGAACTGGCTGGCAAAACCTTGGGAACAAATGGTACTATCTCCGTTCATC
AGGAGCTATGGCAACTGGTTGGTATCAGGAAAGTTCGACTTGGTACTATCTAAATGCAAGTAATGGAGATATGAAAACAGGCT
GGTTCCAAGTCAATGGTAACTGGTACTATGCCTATGATTCAGGTGCTTTAGCTGTTAATACCACAGTAGGTGGTTACTACTTA
AACTATAATGGTGAATGGGTTAAGTAA

(SEQ. ID. NO. 188)
MKLLKKMMQIALATFFFGLLATNTVFADDSEGWQFVQENGRTYYKKGDLKETYWRVIDGKYYYFDPLSGEMVVGWQYIPAPHK
GVTIGPSPRIEIALRPDWFYFGQDGVLQEFVGKQVLEAKTATNTNKHHGEEYDSQAEKRVYYFEDQRSYHTLKTGWIYEEGHW
YYLQKDGGFDSRINRLTVGELARGWVKDYPLTYDEEKLKAAPWYYLNPATGIMQTGWQYLGNRWYYLHSSGAMATGWYKEGST
WYYLDAENGDMRTGWQNLGNKWYYLRSSGAMATGWYQESSTWYYLNASNGDMKTGWFQVNGNWYYAYDSGALAVNTTVGGYYL
NYNGEWVKZ

ID306 (SEQ. ID. NO. 201)
TTGGCTGGTAGATATGGTTCTGCTGTTCAGTGTACAGAAGTGACTGCCTCAAACCTTTCAACAGTTAAAACTAAAGCTACGGT
TGTAGAAAAACCACTGAAAGATTTTAGAGCGTCTACGTCTGATCAGTCTGGTTGGGTGGAATCTAATGGTAAATGGTATTTCT
ATGAGTCTGGTGATGTGAAGACAGGTTGGGTGAAAACAGATGGTAAATGGTACTATTTGAATGACTTAGGTGTCATGCAGACT
GGATTTGTAAAATTTTCTGGTAGCTGGTATTACTTGAGCAATTCAGGTGCTATGTTTACAGGCTGGGGAACAGATGGTAGCAG
ATGGTTCTACTTTGACGGCTCAGGAGCTATGAAGACAGGCTGGTACAAGGAAAATGGCACTTGGTATTACCTTGACGAAGCAG
GTATCATGAAGACAGGTTGGTTTAAAGTCGGACCACACTGGTACTATGCCTACGGTTCAGGAGCTTTGGCTGTGAGCACAACA
ACACCAGATGGTTACCGTGTAAATGGTAATGGTGAATGGGTAAACTAG

(SEQ. ID. NO. 189)
LAGRYGSAVQCTEVTASNLSTVKTKATVVEKPLKDFRASTSDQSGWVESNGKWYFYESGDVKTGWVKTDGKWYYLNDLGVMQT
GFVKFSGSWYYLSNSGAMFTGWGTDGSRWFYFDGSGAMKTGWYKENGTWYYLDEAGIMKTGWFKVGPHWYYAYGSGALAVSTT
TPDGYRVNGNGEWVNZ

ID307 (SEQ. ID. NO. 202)
ATGAAAATTTTGAAAAAAACTATGCAAGTTGGACTGACAGTATTTTTCTTTGGTTTGCTAGGGACCAGTACAGTATTTGCAGA
TGATTCTGAAGGATGGCAGTTTGTCCAAGAAAACGGAAGAACCTACTACAAAAAGGGGGACCTCAAAGAAACCTACTGGCGAG
TGATTGATGGTAAGTACTATTATTTTGATTCTCTATCTGGAGAGATGGTTGTCGGCTGGCAATATATCCCGTTTCCATCTAAA
GGTAGTACAATTGGTCCTTACCCAAATGGTATCAGATTAGAAGGTTTTCCAAAGTCAGAGTGGTACTACTTCGATAAAAATGG
AGTGCTACAAGAGTTTGTTGGTTGGAAAACATTAGAGATTAAAACTAAAGACAGTGTTGGAAGAAAGTACGGGGAAAAACGTG
AAGATTCAGAAGATAAAGAAGAGAAGCGTTATTATACGAACTATTACTTTAATCAAAATCATTCTTTAGAGACAGGTTGGCTT
TATGATCAGTCTAACTGGTATTATCTAGCTAAGACGGAAATTAATGGAGAAAACTACCTTGGTGGTGAAAGACGTGCGGGGTG
GATAAACGATGATTCGACTTGGTACTACCTAGATCCAACAACTGGTATTATGCAAACAGGTTGGCAATATCTAGGTAATAAGT

GGTACTACCTCCGTTCCTCAGGAGCAATGGCCACTGGCTGGTATCAGGAAGGTACCACTTGGTATTATTTAGACCACCCAAAT
GGCGATATGAAAACAGGTTGGCAAAACCTTGGGAACAAATGGTACTATCTCCGTTCATCAGGAGCTATGGCAACTGGTTGGTA
TCAAGATGGTTCAACTTGGTACTACCTAAATGCAGGTAATGGAGACATGAAGACAGGTTGGTTCCAGGTCAATGGCAACTGGT
ACTATGCTTATAGCTCAGGTGCTTTGGCAGTGAATACGACCGTAGATGGCTATTCTGTCAACTATAATGGCGAATGGGTTCGG
TAA

(SEQ. ID. NO. 190)
MKILKKTMQVGLTVFFFGLLGTSTVFADDSEGWQFVQENGRTYYKKGDLKETYWRVIDGKYYYFDSLSGEMVVGWQYIPFPSK
GSTIGPYPNGIRLEGFPKSEWYYFDKNGVLQEFVGWKTLEIKTKDSVGRKYGEKREDSEDKEEKRYYTNYYFNQNHSLETGWL
YDQSNWYYLAKTEINGENYLGGERRAGWINDDSTWYYLDPTTGIMQTGWQYLGNKWYYLRSSGAMATGWYQEGTTWYYLDHPN
GDMKTGWQNLGNKWYYLRSSGAMATGWYQDGSTWYYLNAGNGDMKTGWFQVNGNWYYAYSSGALAVNTTVDGYSVNYNGEWVR
Z

ID308 (SEQ. ID. NO. 203)
ATGAAAAAGAAATTAACTAGTTTAGCACTTGTAGGCGCTTTTTTAGGTTTGTCATGGTATGGGAATGTTCAGGCTCAAGAAAG
TTCAGGAAATAAAATCCACTTTATCAATGTTCAAGAAGGTGGCAGTGATGCGATTATTCTTGAAAGCAATGGACATTTTGCCA
TGGTGGATACAGGAGAAGATTATGATTTCCCAGATGGAAGTGATTCTCGCTATCCATGGAGAGAAGGAATTGAAACGTCTTAT
AAGCATGTTCTAACAGACCGTGTCTTTCGTCGTTTGAAGGAATTGGGTGTCCAAAAACTTGATTTTATTTTGGTGACCCATAC
CCACAGTGATCATATTGGAAATGTTGATGAATTACTGTCTACCTATCCAGTTGACCGAGTCTATCTTAAGAAATATAGTGATA
GTCGTATTACTAATTCTGAACGTCTATGGGATAATCTGTATGGCTATGATAAGGTTTTACAGACTGCTGCAGAAAAAGGTGTT
TCAGTTATTCAAAATATCACACAAGGGGATGCTCATTTTCAGTTTGGGGACATGGATATTCAGCTCTATAATTATGAAAATGA
AACTGATTCATCGGGTGAATTAAAGAAAATTTGGGATGACAATTCCAATTCCTTGATTAGCGTGGTGAAAGTCAATGGCAAGA
AAATTTACCTTGGGGGCGATTTAGATAATGTTCATGGAGCAGAAGACAAGTATGGTCCTCTCATTGGAAAAGTTGATTTGATG
AAGTTTAATCATCACCATGATACCAACAAATCAAATACCAAGGATTTCATTAAAAATTTGAGTCCGAGTTTGATTGTTCAAAC
TTCGGATAGTCTACCTTGGAAAAATGGTGTTGATAGTGAGTATGTTAATTGGCTCAAAGAACGAGGAATTGAGAGAATCAACG
CAGCCAGCAAAGACTATGATGCAACAGTTTTTGATATTCGAAAAGACGGTTTTGTCAATATTTCAACATCCTACAAGCCGATT
CCAAGTTTTCAAGCTGGTTGGCATAAGAGTGCATATGGGAACTGGTGGTATCAAGCGCCTGATTCTACAGGAGAGTATGCTGT
CGGTTGGAATGAAATCGAAGGTGAATGGTATTACTTTAACCAAACGGGTATCTTGTTACAGAATCAATGGAAAAAATGGAACA
ATCATTGGTTCTATTTGACAGACTCTGGTGCTTCTGCTAAAAATTGGAAGAAAATCGCTGGAATCTGGTATTATTTTAACAAA
GAAAACCAGATGGAAATTGGTTGGATTCAAGATAAAGAGCAGTGGTATTATTTGGATGTTGATGGTTCTATGAAGACAGGATG
GCTTCAATATATGGGGCAATGGTATTACTTTGCTCCATCAGGGGAAATGAAAATGGGCTGGGTAAAAGATAAAGAAACCTGGT
ACTATATGGATTCTACTGGTGTCATGAAGACAGGTGAGATAGAAGTTGCTGGTCAACATTATTATCTGGAAGATTCAGGAGCT
ATGAAGCAAGGCTGGCATAAAAAGGCAAATGATTGGTATTTCTACAAGACAGACGGTTCACGAGCTGTGGGTTGGATCAAGGA
CAAGGATAAATGGTACTTCTTGAAAGAAAATGGTCAATTACTTGTGAACGGTAAGACACCAGAAGGTTATACTGTGGATTCAA
GTGGTGCCTGGTTAGTGGATGTTTCGATCGAGAAATCTGCTACAATTAAAACTACAAGTCATTCAGAAATAAAAGAATCCAAA
GAAGTAGTGAAAAAGGATCTTGAAAATAAAGAAACGAGTCAACATGAAAGTGTTACAAATTTTTCAACTAGTCAAGATTTGAC
ATCCTCAACTTCACAAAGCTCTGAAACGAGTGTAAACAAATCGGAATCAGAACAGTAG

(SEQ. ID. NO. 191)
MKKKLTSLALVGAFLGLSWYGNVQAQESSGNKIHFINVQEGGSDAIILESNGHFAMVDTGEDYDFPDGSDSRYPWREGIETSY
KHVLTDRVFRRLKELGVQKLDFILVTHTHSDHIGNVDELLSTYPVDRVYLKKYSDSRITNSERLWDNLYGYDKVLQTAAEKGV
SVIQNITQGDAHFQFGDMDIQLYNYENETDSSGELKKIWDDNSNSLISVVKVNGKKIYLGGDLDNVHGAEDKYGPLIGKVDLM
KFNHHHDTNKSNTKDFIKNLSPSLIVQTSDSLPWKNGVDSEYVNWLKERGIERINAASKDYDATVFDIRKDGFVNISTSYKPI
PSFQAGWHKSAYGNWWYQAPDSTGEYAVGWNEIEGEWYYFNQTGILLQNQWKKWNNHWFYLTDSGASAKNWKKIAGIWYYFNK
ENQMEIGWIQDKEQWYYLDVDGSMKTGWLQYMGQWYYFAPSGEMKMGWVKDKETWYYMDSTGVMKTGEIEVAGQHYYLEDSGA
MKQGWHKKANDWYFYKTDGSRAVGWIKDKDKWYFLKENGQLLVNGKTPEGYTVDSSGAWLVDVSIEKSATIKTTSHSEIKESK
EVVKKDLENKETSQHESVTNFSTSQDLTSSTSQSSETSVNKSESEQZ

ID309 (SEQ. ID. NO. 204)
ATGGAAATTAATGTGAGTAAATTAAGAACAGATTTGCCTCAAGTCGGCGTGCAACCATATAGGCAAGTACACGCACACTCAAC
TGGGAATCCGCATTCAACCGTACAGAATGAAGCGGATTATCACTGGCGGAAAGACCCAGAATTAGGTTTTTTCTCGCACATTG
TTGGGAACGGTTGCATCATGCAGGTAGGACCTGTTGATAATGGTGCCTGGGACGTTGGGGGCGGTTGGAATGCTGAGACCTAT
GCAGCGGTTGAACTGATTGAAAGCCATTCAACCAAAGAAGAGTTCATGACGGACTACCGCCTTTATATCGAACTCTTACGCAA
TCTAGCAGATGAAGCAGGTTTGCCGAAAACGCTTGATACAGGGAGTTTAGCTGGAATTAAAACGCACGAGTATTGCACGAATA
ACCAACCAAACAACCACTCAGACCACGTTGACCCTTATCCATATCTTGCTAAATGGGGCATTAGCCGTGAGCAGTTTAAGCAT
GATATTGAGAACGGCTTGACGATTGAAACAGGCTGGCAGAAGAATGACACTGGCTACTGGTACGTACATTCAGACGGCTCTTA
TCCAAAAGACAAGTTTGAGAAAATCAATGGCACTTGGTACTACTTTGACAGTTCAGGCTATATGCTTGCAGACCGCTGGAGGA
AGCACACAGACGGCAACTGGTACTGGTTCGACAACTCAGGCGAAATGGCTACAGGCTGGAAGAAAATCGCTGATAAGTGGTAC
TATTTCAACGAAGAAGGTGCCATGAAGACAGGCTGGGTCAAGTACAAGGACACTTGGTACTACTTAGACGCTAAAGAAGGCGC
CATGGTATCAAATGCCTTTATCCAGTCAGCGGACGGAACAGGCTGGTACTACCTCAAACCAGACGGAACACTGGCAGACAAGC
CAGAATTCACAGTAGAGCCAGATGGCTTGATTACAGTAAAATAA

(SEQ. ID. NO. 192)
MEINVSKLRTDLPQVGVQPYRQVHAHSTGNPHSTVQNEADYHWRKDPELGFFSHIVGNGCIMQVGPVDNGAWDVGGGWNAETY
AAVELIESHSTKEEFMTDYRLYIELLRNLADEAGLPKTLDTGSLAGIKTHEYCTNNQPNNHSDHVDPYPYLAKWGISREQFKH
DIENGLTIETGWQKNDTGYWYVHSDGSYPKDKFEKINGTWYYFDSSGYMLADRWRKHTDGNWYWFDNSGEMATGWKKIADKWY
YFNEEGAMKTGWVKYKDTWYYLDAKEGAMVSNAFIQSADGTGWYYLKPDGTLADKPEFTVEPDGLITVKZ

ID310 (SEQ. ID. NO. 205)
ATGGGCACAACAGGATTTACAATAATTGACTTAATTATCTTGATTGTTTATTTACTTGCGGTGTTGGTTGCAGGTATCTATTT
CTCTAAAAAAGAGATGAAAGGAAAAGAGTTCTTTAAAGGAGATGGTTCGGTTCCTTGGTATGTTACTTCGGTATCCATTTTTG
CCACAATGCTCAGTCCGATTTCCTTCTTGGGACTCGCTGGTAGCTCTTATGCAGGTAGCTGGATTTTATGGTTTGCTCAATTA
GGGATGGTAGTAGCTATTCCACTGACAATTCGTTTTATCTTACCTATCTTTGCACGGATAGACATCGATACGGCATATGATTA
CTTGGATAAACGTTTTAATTCTAAAGCACTTCGTATTATTTCAGCACTCTTGTTTATTATTTATCAATTGGGACGTATGTCTA
TCATTATGTACCTCCCATCAGCTGGTTTATCAGTATTGACAGGAATTGACATCAATATTTTGATTATTTTGATGGGTGTAGTT
GCAATTGTTTATTCTTATACTGGTGGTCTAAAATCCGTATTATGGACAGACTTTATTCAAGGTGTGATTCTGATTAGTGGTGT

CGTTTTAGCTTTATTTGTACTGATTGCTAATATTAAAGGTGGCTTTGGTGCAGTAGCAGAAACATTAGCAAACGGGAAATTCC
TTGCTGCAAATGAAAAACTTTTCGATCCTAACTTGCTTTCAAACTCCATCTTTTTAATTGTGATGGGTTCAGGCTTTACAATC
TTGTCTTCCTATGCTTCATCTCAAGATTTGGTTCAACGTTTTACTACAACACAAAATATTAAGAAACTTAATAAGATGTTGTT
CACAAACGGTGTTTTGTCACTTGCAACTGCAACAGTCTTTTACTTGATTGGTACAGGCTTGTACGTATTCTATCAAGTACAAA
ATGCAGATAGTGCAGCTAGCAATATCCCTCAAGACCAAATCTTTATGTACTTTATTGCATACCAGTTACCAGTAGGTATCACA
GGTTTGATCTTGGCAGCGATTTATGCAGCATCTCAATCAACTATTTCAACAGGTTTGAACTCTGTTGCAACTTCATGGACATT
GGATATTCAAGATGTCATTTCTAAAAATATGTCAGACAATCGTCGTACGAAAATTGCACAATTCGTATCTCTAGCAGTAGGTT
TATTCTCAATTGGTGTTTCCATTGTCATGGCTCACTCAGATATTAAATCTGCATACGAATGGTTCAATAGTTTCATGGGACTT
GTACTTGGTCTACTTGGTGGTGTATTTATTCTTGGATTTGTTTCTAAAAAAGCAAATAAACAAGGTGCTTATGCAGCGCTGAT
TGTATCAACCATCGTCATGGTATTTATTAAATACTTCCTTCCTCCAACAGCTGTTAGCTACTGGGCATATTCATTGATTTCAA
TCTCTGTATCAGTAGTTTCAGGTTATATTGTATCTGTTCTTACTGGAAATAAAGTATCTGCACCTAAATATACAACGATTCAT
GATATTACAGAAATTAAAGCGGATTCAAGTTGGGAAGTTCGTCACTAA

(SEQ. ID. NO. 193)
MGTTGFTIIDLIILIVYLLAVLVAGIYFSKKEMKGKEFFKGDGSVPWYVTSVSIFATMLSPISFLGLAGSSYAGSWILWFAQL
GMVVAIPLTIRFILPIFARIDIDTAYDYLDKRFNSKALRIISALLFIIYQLGRMSIIMYLPSAGLSVLTGIDINILIILMGVV
AIVYSYTGGLKSVLWTDFIQGVILISGVVLALFVLIANIKGGFGAVAETLANGKFLAANEKLFDPNLLSNSIFLIVMGSGFTI
LSSYASSQDLVQRFTTTQNIKKLNKMLFTNGVLSLATATVFYLIGTGLYVFYQVQNADSAASNIPQDQIFMYFIAYQLPVGIT
GLILAAIYAASQSTISTGLNSVATSWTLDIQDVISKNMSDNRRTKIAQFVSLAVGLFSIGVSIVMAHSDIKSAYEWFNSFMGL
VLGLLGGVFILGFVSKKANKQGAYAALIVSTIVMVFIKYFLPPTAVSYWAYSLISISVSVVSGYIVSVLTGNKVSAPKYTTIH
DITEIKADSSWEVRHZ

ID311 (SEQ. ID. NO. 206)
ATGAAAATTAATAAAAAATATCTAGCAGGTTCAGTGGCAGTCCTTGCCCTAAGTGTTTGTTCCTATGAGCTTGGTCGTCACCA
AGCTGGTCAGGATAAGAAAGAGTCTAATCGAGTTGCTTATATAGATGGTGATCAGGCTGGTCAAAAGGCAGAAAACTTGACAC
CAGATGAAGTCAGTAAGAGGGAGGGGATCAACGCCGAACAAATCGTCATCAAGATTACGGATCAAGGTTATGTGACCTCTCAT
GGAGACCATTATCATTACTATAATGGCAAGGTCCCTTATGATGCCATCATCAGTGAAGAGCTCCTCATGAAAGATCCGAATTA
TCAGTTGAAGGATTCAGACATTGTCAATGAAATCAAGGGTGGTTATGTCATCAAGGTAGACGGAAAATACTATGTTTACCTTA
AGGATGCAGCTCATGCGGATAATATTCGGACAAAAGAAGAGATTAAACGTCAGAAGCAGGAACGCAGTCATAATCACGGGTCA
GGAGCTAACGATCATGCAGTAGCTGCAGCCAGAGCCCAAGGACGCTATACAACGGATGATGGGTATATCTTCAATGCATCTGA
TATCATTGAGGACACGGGTGATGCTTATATCGTTCCTCACGGCGACCATTACCATTACATTCCTAAGAATGAGTTATCAGCTA
GCGAGTTAGCTGCTGCAGAAGCCTATTGGAATGGGAAGCAGGGATCTCGTCCTTCTTCAAGTTCTAGTTATAATGCAAATCCA
GCTCAACCAAGATTGTCAGAGAACCACAATCTGACTGTCACTCCAACTTATCATCAAAATCAAGGGGAAAACATTTCAAGCCT
TTTACGTGAATTGTATGCTAAACCCTTATCAGAACGCCATGTGGAATCTGATGGCCTTATTTTCGACCCAGCGCAAATCACAA
GTCGAACCGCCAGAGGTGTAGCTGTCCCTCATGGTAACCATTACCACTTTATCCCTTATGAACAAATGTCTGAATTGGAAAAA
CGAATTGCTCGTATTATTCCCCTTCGTTATCGTTCAAACCATTGGGTACCAGATTCAAGACCAGAACAACCAAGTCCACAATC
GACTCCGGAACCTAGTCCAAGTCCGCAACCTGCACCAAATCCTCAACCAGCTCCAAGCAATCCAATTGATGAGAAATTGGTCA
AAGAAGCTGTTCGAAAAGTAGGCGATGGTTATGTCTTTGAGGAGAATGGAGTTTCTCGTTATATCCCAGCCAAGGATCTTTCA
GCAGAAACAGCAGCAGGCATTGATAGCAAACTGGCCAAGCAGGAAAGTTTATCTCATAAGCTAGGAGCTAAGAAAACTGACCT
CCCATCTAGTGATCGAGAATTTTACAATAAGGCTTATGACTTACTAGCAAGAATTCACCAAGATTTACTTGATAATAAAGGTC
GACAAGTTGATTTTGAGGCTTTGGATAACCTGTTGGAACGACTCAAGGATGTCCCAAGTGATAAAGTCAAGTTAGTGGATGAT
ATTCTTGCCTTCTTAGCTCCGATTCGTCATCCAGAACGTTTAGGAAAACCAAATGCGCAAATTACCTACACTGATGATGAGAT
TCAAGTAGCCAAGTTGGCAGGCAAGTACACAACAGAAGACGGTTATATCTTTGATCCTCGTGATATAACCAGTGATGAGGGGG
ATGCCTATGTAACTCCACATATGACCCATAGCCACTGGATTAAAAAAGATAGTTTGTCTGAAGCTGAGAGAGCGGCAGCCCAG
GCTTATGCTAAAGAGAAAGGTTTGACCCCTCCTTCGACAGACCATCAGGATTCAGGAAATACTGAGGCAAAAGGAGCAGAAGC
TATCTACAACCGCGTGAAAGCAGCTAAGAAGGTGCCACTTGATCGTATGCCTTACAATCTTCAATATACTGTAGAAGTCAAAA
ACGGTAGTTTAATCATACCTCATTATGACCATTACCATAACATCAAATTTGAGTGGTTTGACGAAGGCCTTTATGAGGCACCT
AAGGGGTATACTCTTGAGGATCTTTTGGCGACTGTCAAGTACTATGTCGAACATCCAAACGAACGTCCGCATTCAGATAATGG
TTTTGGTAACGCTAGCGACCATGTTCAAAGAAACAAAAATGGTCAAGCTGATACCAATCAAACGGAAAAACCAAGCGAGGAGA
AACCTCAGACAGAAAAACCTGAGGAAGAAACCCCTCGAGAAGAGAAACCGCAAAGCGAGAAACCAGAGTCTCCAAAACCAACA
GAGGAACCAGAAGAATCACCAGAGGAATCAGAAGAACCTCAGGTCGAGACTGAAAAGGTTGAAGAAAAACTGAGAGAGGCTGA
AGATTTACTTGGAAAAATCCAGGATCCAATTATCAAGTCCAATGCCAAAGAGACTCTCACAGGATTAAAAAATAATTTACTAT
TTGGCACCCAGGACAACAATACTATTATGGCAGAAGCTGAAAAACTATTGGCTTTATTAAAGGAGAGTAAGTAA

(SEQ. ID. NO. 194)
MKINKKYLAGSVAVLALSVCSYELGRHQAGQDKKESNRVAYIDGDQAGQKAENLTPDEVSKREGINAEQIVIKITDQGYVTSH
GDHYHYYNGKVPYDAIISEELLMKDPNYQLKDSDIVNEIKGGYVIKVDGKYYVYLKDAAHADNIRTKEEIKRQKQERSHNHGS
GANDHAVAAARAQGRYTTDDGYIFNASDIIEDTGDAYIVPHGDHYHYIPKNELSASELAAAEAYWNGKQGSRPSSSSSYNANP
AQPRLSENHNLTVTPTYHQNQGENISSLLRELYAKPLSERHVESDGLIFDPAQITSRTARGVAVPHGNHYHFIPYEQMSELEK
RIARIIPLRYRSNHWVPDSRPEQPSPQSTPEPSPSPQPAPNPQPAPSNPIDEKLVKEAVRKVGDGYVFEENGVSRYIPAKDLS
AETAAGIDSKLAKQESLSHKLGAKKTDLPSSDREFYNKAYDLLARIHQDLLDNKGRQVDFEALDNLLERLKDVPSDKVKLVDD
ILAFLAPIRHPERLGKPNAQITYTDDEIQVAKLAGKYTTEDGYIFDPRDITSDEGDAYVTPHMTHSHWIKKDSLSEAERAAAQ
AYAKEKGLTPPSTDHQDSGNTEAKGAEAIYNRVKAAKKVPLDRMPYNLQYTVEVKNGSLIIPHYDHYHNIKFEWFDEGLYEAP
KGYTLEDLLATVKYYVEHPNERPHSDNGFGNASDHVQRNKNGQADTNQTEKPSEEKPQTEKPEEETPREEKPQSEKPESPKPT
EEPEESPEESEEPQVETEKVEEKLREAEDLLGKIQDPIIKSNAKETLTGLKNNLLFGTQDNNTIMAEAEKLLALLKESKZ

ID312 (SEQ. ID. NO. 207)
ATGGAGGGATTGGTTAGAGTGCATTTATTGCCTGTATTTGGCGATTACAAGCTATCTAAACTTACTACGCCTATTCTTCAACA
GCAAGTAAACAAATGGGCTGACAAGGCAAATAAAGGCGAAAAAGGGGCATTTGCTAACTACTCTTTGCTCCATAACATGAATA
AGCGTATTTTGAAATATGGCGTAGCTATCCAGGTAATACAATACAACCCAGCTAATGATGTCATCGTTCCACGCAAACAGCAA
AAAGAAAAGGCTGCTGTCAAATACTTAGACAACAAAGAATTAAAACAGTTTCTTGATTATTTAGATGCTCTGGATCAATCAAA
TTATGAGAACTTATTTGATGTTGTTCTGTATAAGACTTTATTGGCCACTGGTTGCCGTATTAGTGAGGCTCTGGCTCTTGAAT
GGTCTGATATTGACCTAGAAAGCGGTGTTATCAGCATCAATAAGACACTAAACCGCTATCAGGAAATAAACTCACCTAAATCA
AGCGCTGGTTATCGTGATATACCAATAGACAAAGCCACATTACTTTTACTGAAACAATACAAAAACCGTCAACAAATTCAGTC
TTGGAAATTAGGCCGATCTGAAACAGTTGTATTCTCTGTATTTACGGAGAAATATGCTTATGCTTGTAACTTACGCAAACGCC
TAAATAAGCATTTTGATGCTGCTGGAGTAACTAACGTATCATTTCATGGTTTCCGCCATACACATACTACTATGATGCTCTAT

GCTCAGGTTAGCCCGAAAGATGTTCAGTATAGATTAGGCCACTCTAATTTAATGATCACTGAAAATACTTACTGGCATACTAA
CCAAGAGAATGCAAAAAAAGCCGTCTCAAATTATGAAACAGCTATCAACAATTTATAA

(SEQ. ID. NO. 195)
MEGLVRVHLLPVFGDYKLSKLTTPILQQQVNKWADKANKGEKGAFANYSLLHNMNKRILKYGVAIQVIQYNPANDVIVPRKQQ
KEKAAVKYLDNKELKQFLDYLDALDQSNYENLFDVVLYKTLLATGCRISEALALEWSDIDLESGVISINKTLNRYQEINSPKS
SAGYRDIPIDKATLLLLKQYKNRQQIQSWKLGRSETVVFSVFTEKYAYACNLRKRLNKHFDAAGVTNVSFHGFRHTHTTMMLY
AQVSPKDVQYRLGHSNLMITENTYWHTNQENAKKAVSNYETAINNLZ

At Page 1, 2nd full paragraph:

Background of the Invention

Streptococcus pneumoniae, commonly referred to as the pneumococcus, is an important pathogenic organism. The continuing significance of *Streptococcus pneumoniae* infections in relation to human disease in developing and developed countries has been authoritatively reviewed (Fiber, G.R., Science, **265**:1385-1387 (1994)). That indicates that on a global scale this organism is believed to be the most common bacterial cause of acute respiratory infections, and is estimated to result in 1 million childhood deaths each year, mostly in developing countries (Stansfield, S.K., *Pediatr. Infect. Dis.*, **6**:622 (1987)). In the USA it has been suggested (Breiman *et al, Arch. Intern. Med.*, 150:1401 (1990)) that the pneumococcus is still the most common cause of bacterial pneumoniae, and that disease rates are particularly high in young children, in the elderly, and in patients with predisposing conditions such as asplenia, heart, lung, and kidney disease, diabetes, alcoholism, or with immunosuppressive disorders, especially AIDS. These groups are at higher risk of pneumococcal septicaemia and hence meningitis and therefore have a greater risk of dying from pneumococcal infection. The pneumococcus is also the leading cause of otitis media and sinusitis, which remain prevalent infections in children in developed countries, and which incur substantial costs.

At Page 3, 2nd full paragraph:

Brief Summary of the Invention

Thus, in a first aspect the present invention provides a Streptococcus pneumoniae protein or polypeptide having a sequence selected from those shown in Table 2 herein.

At Page 3, 2nd full paragraph:

Detailed Description of the Invention

As discussed herein, the proteins and polypeptides of the invention are useful as antigenic material. Such material can be "antigenic" and/or "immunogenic". Generally, "antigenic" is taken to mean that the protein or polypeptide is capable of being used to raise antibodies or indeed is capable of inducing an antibody response in a subject. "Immunogenic" is taken to mean that the protein or polypeptide is capable of eliciting a protective immune response in a subject. Thus, in the latter case, the protein or polypeptide may be capable of not only generating an antibody response and in addition non-antibody based immune responses.

At page 101, line 1:

~~CLAIMS~~ *What is claimed is*: